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F2Q 3A1

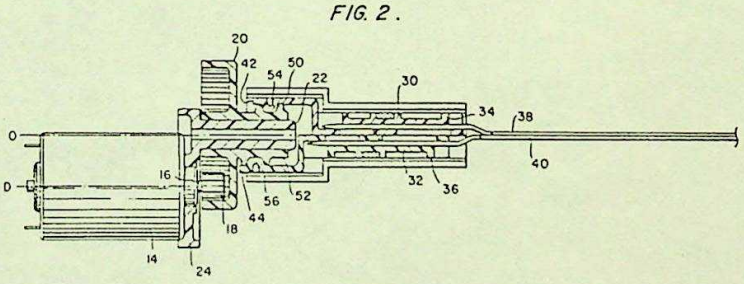
(56) Documents cited
None

(58) Field of search
B4B
A4C
F2Q
Selected US specifications from IPC sub-class B26B

(54) Electric knife drive mechanism

(57) An electric knife 10 has a housing with a motor 14 fixed in the housing, a drive shaft 16 disposed for rotation about a drive axis D, a spur gear 18 fixed to the end of the drive shaft, a flange fixed to the motor and having an integrally formed, axially-projecting output shaft 22 coaxial to an output axis 0 and parallel to the drive axis D. An output gear 20 meshes with the spur gear 18 and is rotatably mounted on the output shaft 22. A tubular element, having an extension cylindrical cam 50, rotates with the output gear 20. A pair of blade holders 30, 32 are disposed in the housing for linear reciprocation parallel to and on opposite sides of the output axis 0. Each blade holder 30, 32 has a first end for releasably engaging a blade 38, 40 and a second end including a cam follower 54, 56 engaging the cam 50. The cam followers 54, 56 engage the cam 50 at positions 180 degrees apart such that rotation of the output gear 20 generates independent, opposite linear reciprocation of the blade holders 30, 32.

FIG. 2.



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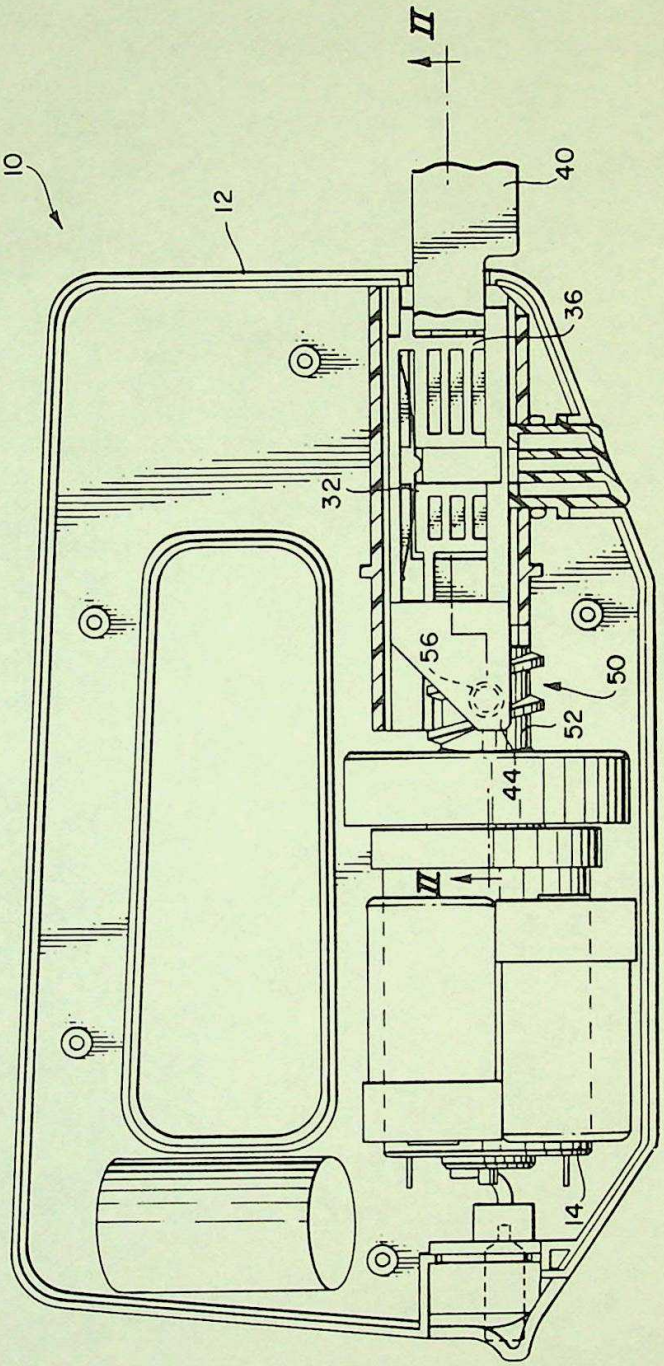


FIG. 1.

FIG. 2.

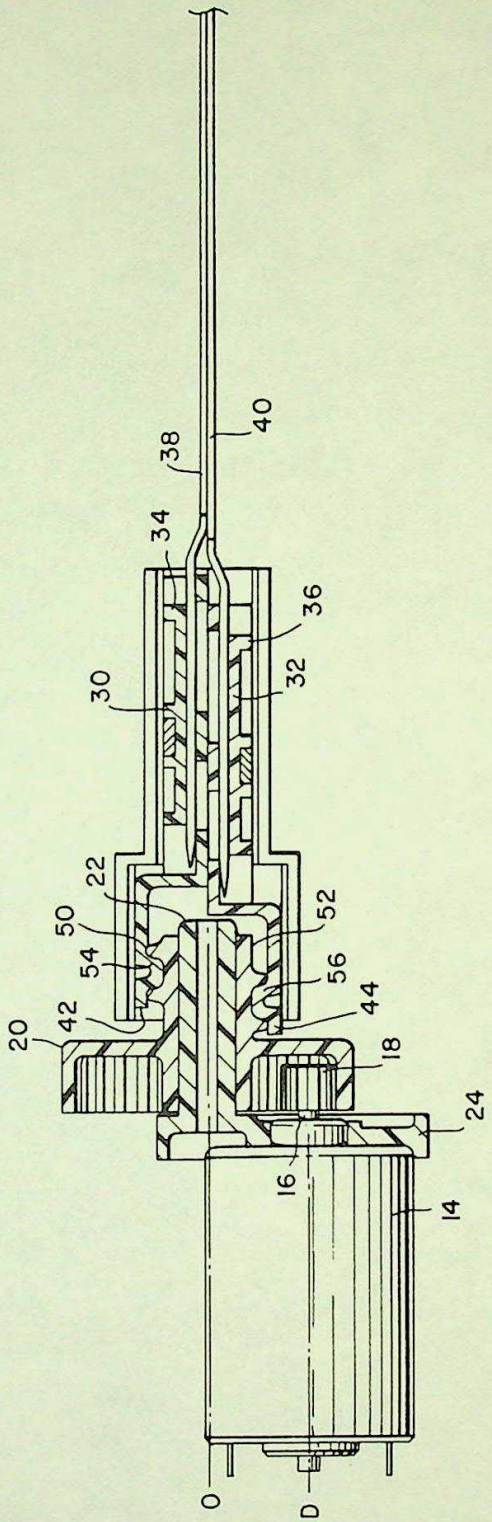


FIG. 3.

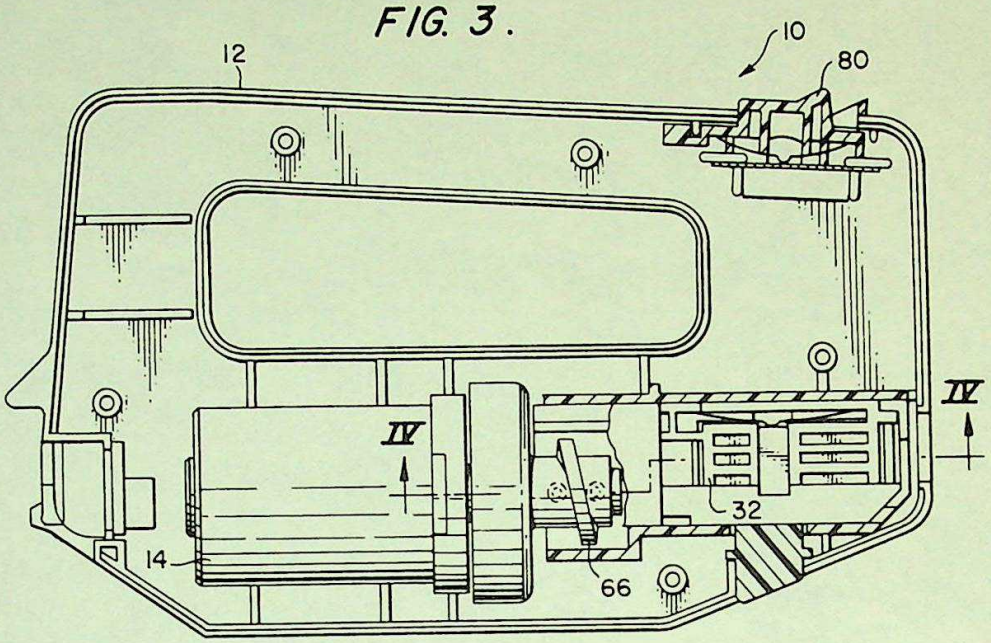


FIG. 5.

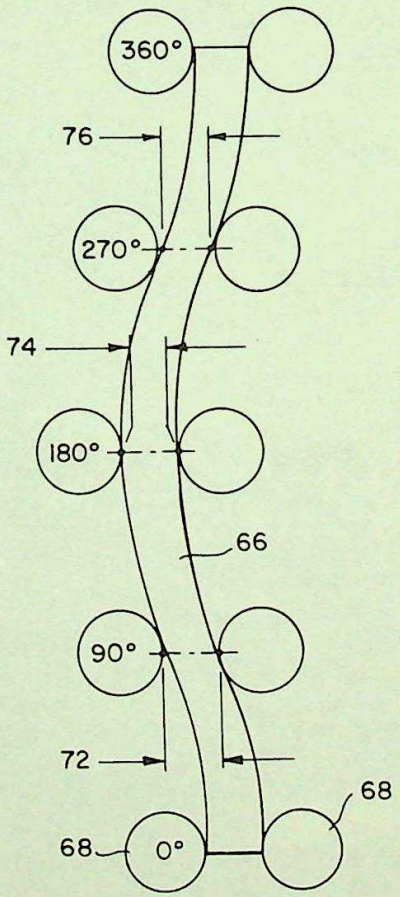
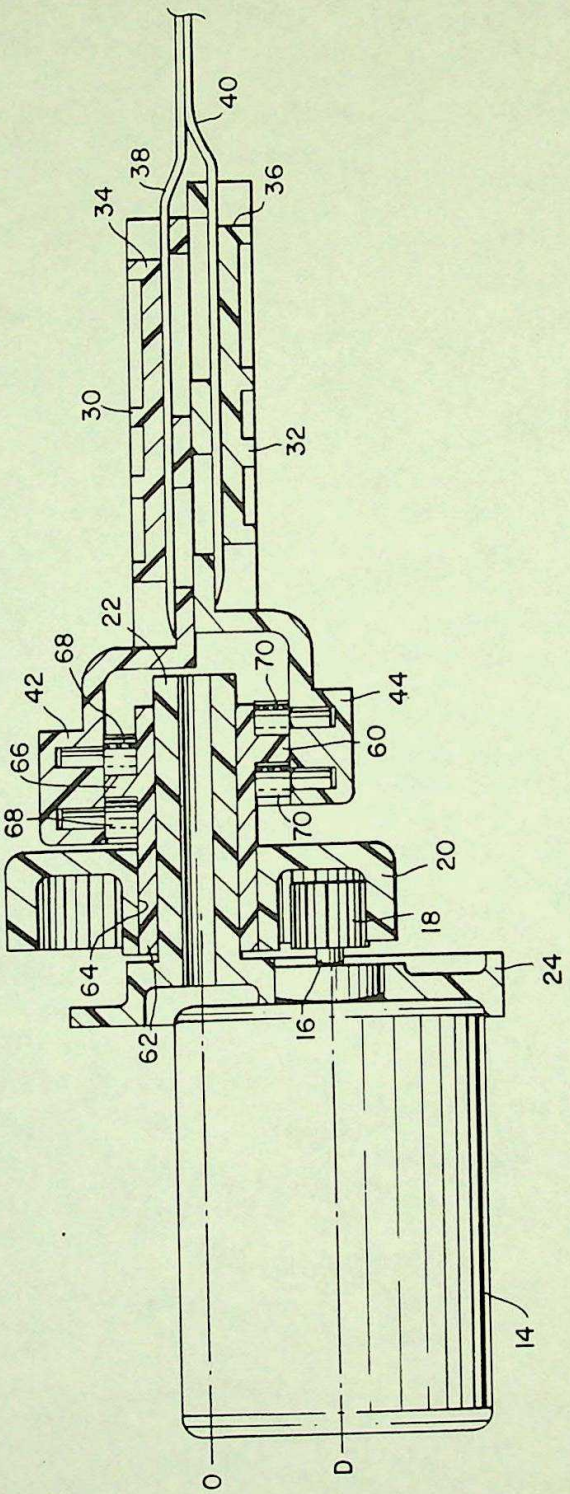


FIG. 4.



SPECIFICATION

Electric knife drive mechanism

The invention concerns electric knives, particularly the drive mechanism therefor.

Known electric knives have complex drive mechanisms generally incorporating worm gear arrangements for converting rotational drive of a motor to linear reciprocation of the blades. Such knives are expensive, require multiple parts having interdependent tolerances, and are subject to frequent failure due to the many parts. Additionally, the worm gear arrangements impose power requirements which generally preclude use of small motors or battery power.

Examples of such prior art electric knives are shown in United States Patent Nos. 3,152,398; 3,300,857; 3,303,563; 3,357,102; 3,337,954; and 3,606,216.

The present invention mitigates the above disadvantages of the prior art by providing a simple drive mechanism having few parts and incorporating a spur gear set.

There is provided by the present invention an electric knife comprising a housing; drive gear means disposed in said housing for rotation about a drive axis; power means for rotating said drive gear means; reduction gear means disposed in said housing in meshing engagement with said drive gear means for rotation about an output axis substantially parallel to the drive axis; a pair of blade holders disposed in said housing in adjacent, opposed relation for independent, linear reciprocation substantially parallel to and on opposite sides of said output axis; and cam means driven by said reduction gear means and operatively engaging said blade holders for generating independent, opposite linear reciprocation of said blade holders.

Preferably, the power means is a motor having a drive shaft and the drive gear means is a spur gear mounted on the end of the drive shaft. The reduction gear means is preferably an internal spur gear in meshing engagement with the spur gear on the drive shaft for rotation about an output axis parallel to the drive axis.

The cam means preferably comprises a cylindrical cam coaxial with and driven by the reduction gear means for rotation about the output axis, and a cam follower fixed to each blade holder, each cam follower operatively engaging the cam 180° apart from the other cam follower.

Preferably, the cylindrical cam and the internal spur gear form a single unit.

By way of example, embodiments of the invention will now be described in greater detail with reference to the accompanying drawings, in which:

Figure 1 is a cross-sectional view of an embodiment of the present invention;

Figure 2 is a cross-sectional view of the drive mechanism of the embodiment of Figure 1 taken on line II-II thereof;

Figure 3 is a cross-sectional view of a second embodiment of the invention;

Figure 4 is a cross-sectional view of the drive mechanism of the embodiment of Figure 3 taken on line IV-IV thereof; and

Figure 5 is a diagrammatic representation of the cam means of the embodiment of Figure 3.

Figures 1 to 5 illustrate two preferred embodiments of the electric knife of the present invention, like components being designated in both embodiments by the same reference numerals.

The electric knife 10 of both embodiments comprises a housing 12, drive gear means 18 disposed in the housing for rotation about a drive axis D, and power means 14 for selectively rotating the drive gear means. The power means comprises an electric motor 14 disposed in housing 12 and having a drive shaft 16 for rotation about the drive axis D. The drive gear means comprises a spur gear 18 which is fixed to the output shaft 16 for rotation therewith about the drive axis D.

The electric knife 10 also includes reduction gear means disposed in the housing in meshing engagement with the drive gear means for rotation about an output axis O parallel to the drive axis D. As shown in Figures 2 and 4, the reduction gear means comprises internal spur gear 20 in meshing engagement with spur gear 18 for rotation about the output axis O. Preferably, internal spur gear 20 is rotatably mounted on an output shaft 22 coaxial with output axis O. Output shaft 22 is preferably an integral projection of a flange 24 which is fixed to the motor 14. By this arrangement, the relationship between spur gear 18 and internal spur gear 20 is fixed.

A pair of blade holders 30, 32 are disposed in the housing 12 in adjacent, opposed relation for independent, linear reciprocation parallel to and on opposite sides of the output axis O. Blade holders 30, 32 are independent of each other and are disposed for linear reciprocal movement parallel to and on opposite sides of output axis O. Preferably, each blade holder 30, 32 has a first end 34, 36 for releasably engaging a blade 38, 40, and a second end 42, 44.

The electric knife further includes cam means driven by the reduction gear means 20 and operatively engaging the blade holders 30, 32 for generating independent opposite linear reciprocation of the blade holders.

In the embodiment of Figures 1 and 2, the cam means comprises a cylindrical cam 50 coaxial with and driven by internal spur gear 20 for rotation about the output axis O. Preferably, a tubular extension 52 is integrally formed with and coaxially projects from internal spur gear 20. Output shaft 22 is elongated axially to serve as a bearing surface for rotation of the tubular extension 52 with the internal spur gear 20. By forming the output gear or internal spur gear 20 in one piece with tubular extension 52 on which the cam 50 is formed, the relationship between internal spur gear 20 and cam 50 is fixed and the number of pieces is reduced. With the one-piece output gear and cam rotatably disposed on output shaft 22, the relationship of the cam to the drive shaft 16 is fixed. The cam means also preferably includes a cam follower integral

with each blade holder. In the embodiment of Figures 1 and 2, cam followers 54, 56 are integrally formed radial projections on the second ends 42, 44 of blade holders 30, 32. Cam followers 54, 56 slidably engage the cam 50 at positions 180 degrees apart such that rotation of the internal spur gear 20 and cam 50 will generate independent, opposite linear reciprocation of blade holders 30, 32. Cam 50 is preferably formed by a slot on the outside surface of the tubular extension 52.

In the second embodiment shown in Figures 3 to 5, the cam means comprises a cylindrical cam 60 coaxial with and driven by the internal spur gear 20 for rotation about output axis O. Preferably, cam 60 includes a tubular projection 62 coaxially engaging internal spur gear 20. Tubular projection 62 may be slidably disposed in an axial bore 64 of internal spur gear 20; a portion of the contiguous surfaces of bore 64 and projection 62 being formed to cooperate and prevent relative rotation between internal spur gear 20 and projection 62. In the alternative, tubular projection 62 may be fixed in bore 64. Projection 62 with cam 60 at one end thereof and internal spur gear 20 at the other end thereof is disposed for rotation on the output shaft 22. The cam 60 comprises a radially projecting rib 66 defining a generally cycloidal or harmonic path. The cam followerw preferably comprise pairs of axially spaced rollers 68, 70 radially projecting inwardly from the second ends 42, 44 of the blade holders 30, 32. The rollers, preferably of sintered iron, are rotatably disposed on pins fixed to the second ends 42, 44 of blade holders 30, 32, and are spaced in pairs to engage rib 66 180 degrees apart such that rotation of cam 60 causes linear reciprocation of blade holders 30, 32. The rib 66 may define a cycloidal path in order to reduce acceleration forces at the high and low points of the motion or where the direction of linear motion of blade holders 30, 32 is reversed. Rib 66 may be modified by thinning the steep sections of the cam, so allowing a reduction of free play between the rollers and the cam at the high and low points of the cam. This structural relationship is depicted diagrammatically in Figure 5. Rollers 68 are spaced apart a fixed distance 72, and rib 66 has a thickness 74 at the high and low points (180 degrees and 360 degrees) which substantially prevents free play between rollers 68. This thickness 74 is tapered to a reduced thickness 76 between the high and low points of the cam to allow free passage of these portions of the cam between the rollers 68.

in both illustrated embodiments, cylindrical cams 50, 60 preferably have a rise which is either harmonic or cycloidal.

In operation of both the above embodiments, motor 14 is selectively activated by a switch mechanism 80 (shown in Figure 3) to rotate drive shaft 16 and spur gear 18. Rotation of spur gear 18 rotates at reduced speed internal spur gear 20 and cams 50, 60, respectively. Cam followers 54, 56 or 68, 70, which engage the cylindrical cam, are axially moved in reciprocating fashion in opposite directions thereby linearly reciprocating blade holders 30, 32. With blades 38, 40 secured in one end 34, 36 of blade holders 30,32, the blades linearly reciprocate in opposite directions for the classic cutting action of an electric knife.

It will be appreciated, therefore, that a drive mechanism for an electric knife is provided which is substantially simpler than the prior art and takes advantage of the more efficient spur gear mechanism. This permits construction of an electric knife with a smaller electric motor driven by batteries.

It will be apparent to those skilled in the art that various modifications and variations may be made to the drive mechanism of the electric knife of the invention without departing from the scope of the invention as defined in the following claims.

CLAIMS

1. An electric knife, comprising:
a housing;
drive gear means disposed in said housing for rotation about a drive axis;
power means for rotating said drive gear means;
reduction gear means disposed in said housing in meshing engagement with said drive gear means for rotation about an output axis substantially parallel to said drive axis;
a pair of blade holders disposed in said housing in adjacent, opposed relation for independent, linear reciprocation substantially parallel to and on opposite sides of said output axis; and
cam means driven by said reduction gear means and operatively engaging said blade holders for generating independent, opposite linear reciprocation of said blade holders.

2. The electric knife of Claim 1, wherein said power means comprises an electric motor disposed in said housing and having a drive shaft, and said drive gear means comprises a spur gear fixed to said drive shaft.

3. The electric knife of Claim 1 or 2, wherein said reduction gear means comprises an internal spur gear rotatably mounted on an output shaft coaxial with said output axis.

4. The electrical knife of Claim 3, wherein said output shaft is an integral projection of a flange fixed to said motor.

5. The electric knife of any preceding claim, wherein each said blade holder includes a first end for releasably engaging a blade and a second end for operatively engaging said cam means.

6. The electric knife of any preceding claim, wherein said cam means comprises a cylindrical cam coaxial with and driven by said reduction gear means for rotation about said output axis and a cam follower mounted on each said blade holder, each said cam follower operatively engaging said cam 180 degrees apart from the other cam follower.

7. The electric knife of Claim 6 when dependent upon Claim 3, wherein said internal spur gear and said cam comprise one piece.

8. The electric knife of Claim 7, wherein said cam comprises a coaxial tubular extension of said internal spur gear, said tubular extension having a groove formed in the surface thereof.

9. The electric knife of Claim 8, wherein the cam follower of each said blade holder is an integrally-formed projection at the second end thereof disposed to slidably engage said groove.

10. The electric knife of any one of Claims 1 to 7, wherein said cam means comprises a rib projecting normal to and rotatable about said output axis and a pair of rollers radially projecting from each of said blade holders, the rollers of each said pair being axially spaced to engage said rib such that rotation of said rib causes linear reciprocation of said blade holder.

11. The electric knife of Claim 10, wherein the axial spacing of said rollers is constant, and the thickness of said rib is greatest at points at which said blade holders reverse direction of linear movement.

12. The electric knife of any preceding claim, wherein said cam means defines a harmonic cam path.

13. The electric knife of any one of Claims 1 to 11, wherein said cam means defines a cycloidal cam path.

14. An electric knife substantially as hereinbefore described with reference to Figures 1 and 2.

15. An electric knife substantially as hereinbefore described with reference to Figures 3, 4 and 5.

Amendments to the claims have been filed, and have the following effect:-

Claims 1 to 15 above have been deleted or textually amended.

1. An electric knife comprising:

a housing;

a spur gear disposed in said housing for rotation about a drive axis;

power means for rotating said spur gear;

an internal spur gear disposed in said housing in meshing engagement with said spur gear for rotation about an output axis substantially parallel to said drive axis;

a pair of blade holders disposed in said housing in adjacent, opposed relation for independent, linear reciprocation substantially parallel to and on opposite sides of said output axis; and

cam means driven by said internal spur gear and operatively engaging said blade holders for generating independently, opposite linear reciprocation of said blade holders.

2. An electric knife as claimed in Claim 1, wherein said power means comprises an electric motor disposed in said housing.

3. An electric knife as claimed in Claim 2, wherein said internal spur gear is rotatably mounted on an integral projection of a flange fixed to said electric motor.

4. An electric knife as claimed in any preceding claim, wherein each said blade holder includes a first end for releasably engaging a blade and a second end for operatively engaging said cam means.

5. An electric knife as claimed in any preceding claim, wherein said cam means comprises a cylindrical cam coaxial with and rotatable by said internal spur gear about said output axis and a cam follower mounted on each said blade holder, each said cam follower operatively engaging said cam 180 degrees apart from the other cam follower.

6. An electric knife as claimed in Claim 6, wherein said internal spur gear and said cam comprise one piece.

7. An electric knife as claimed in Claim 6, wherein said cam comprises a coaxial extension of said internal spur gear, said tubular extension having a groove formed in the surface thereof.

8. An electric knife as claimed in Claim 7, wherein the cam follower of each said blade holder is an integrally formed projection at the second end thereof disposed to slidably engage said groove.

9. An electric knife as claimed in any preceding claim, wherein said cam means comprises a rib projecting normal to and rotatable about said output axis and a pair of rollers radially projecting from each of said blade holders, the rollers of each said pair being axially spaced to engage said rib such that rotation of said rib causes linear reciprocation of said blade holder.

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D7/646
SEPT, 1984

BEAUTIFUL N PRACTICAL
ELECTRICAL APPLIANCE AT ITS BEST

HONG KONG ENTERPRISE
SEPT. 1984
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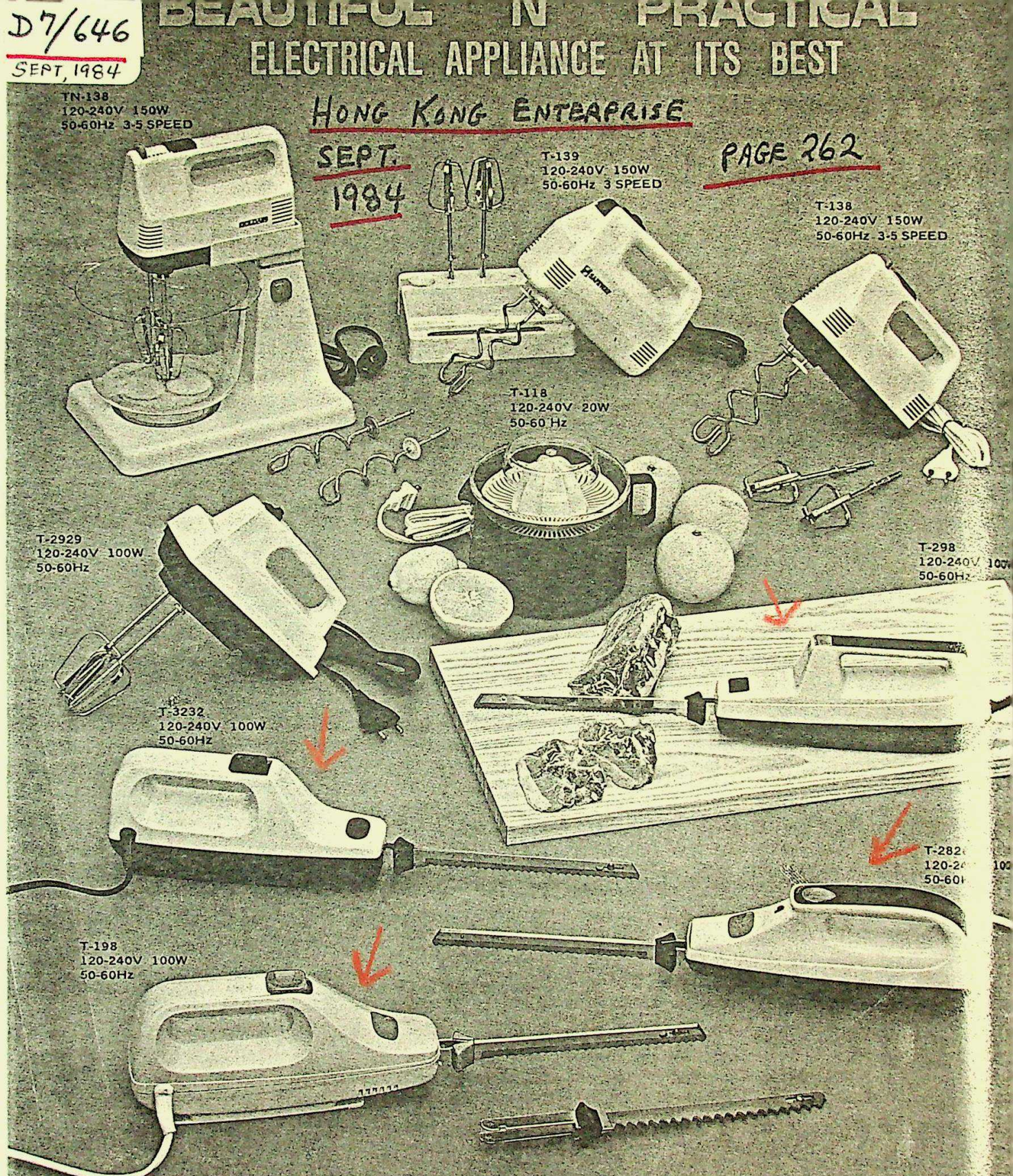

TUNG NGAI PLASTIC MFG. CO., LTD.

City Industrial Complex, 9/F., Flat A & B, 116-122 Kwok Shui Road,
Kwai Chung, N.T., Hong Kong.
Tel: 0-261121-3 0-261297 Telex: 39243 TNPMC HX

Bank: Hang Seng Bank Ltd, Kwai Chung.

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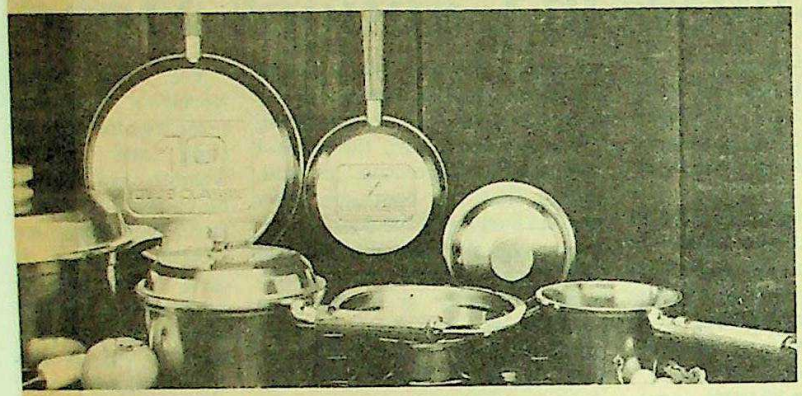
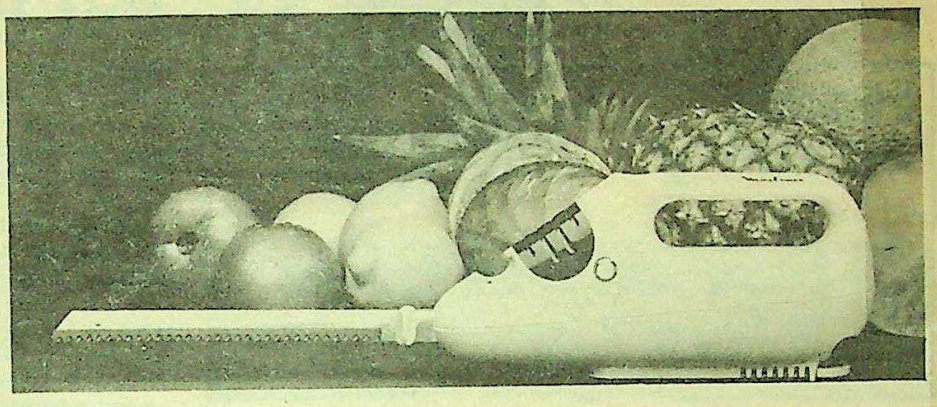
HFD JULY 24, 1978 PAGE 51

new products





PRODUCTS
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STEAM UP SALES THIS SUMMER WITH

Vita-Saver

Built to last — 100% Stainless Steel®

Announcing a quiet revolution.

There's a new look at General Electric-Universal. Everything from product to package to promotions.

The product: We've re-designed many of our products, added 6 new ones, and 3 exciting specials.

The package: Every line model General Electric-Universal coffeemaker and iron and can opener and slicing knife and mixer will be packed in attractive, four-color, stand-out-on-your-shelf cartons.

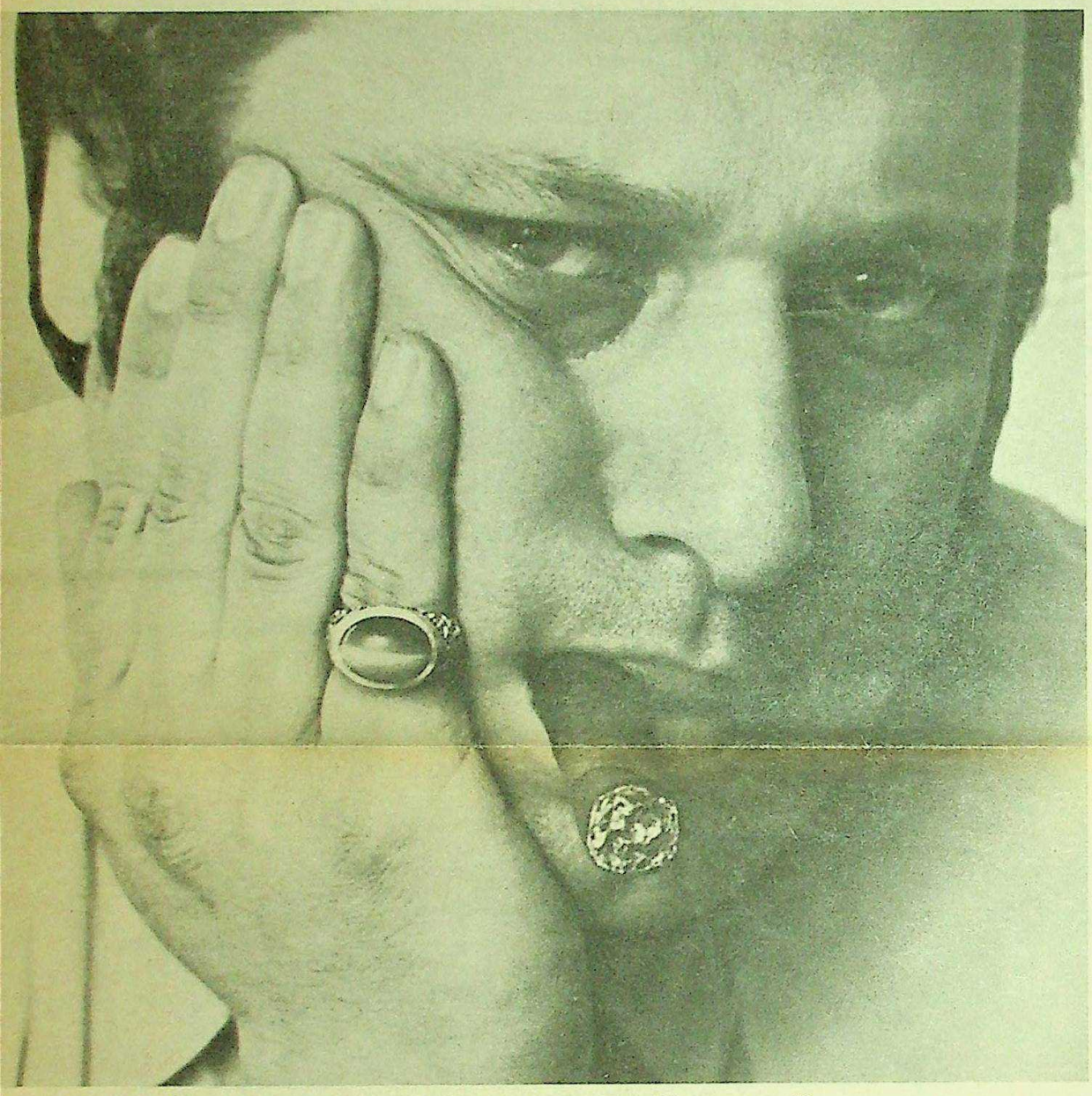
The promotions: We're initiating unusual consumer promotions to help you piggyback sales. For instance, our Goldenrod promotion that lets her buy one General Electric-Universal product and get $1 back. Buy two, and get $3 back. Buy three, and get $6 back. Buy four, and get $10 back. She wins. So do you. That's just one. There are others. Plus exciting merchandising opportunities for this exciting line.

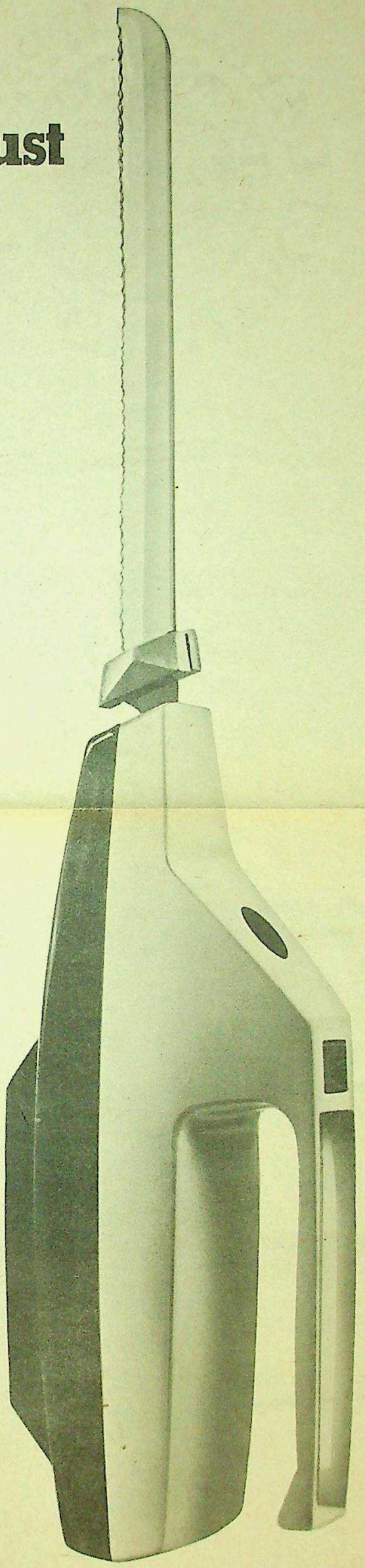
Come see the Gift Line at GE-Universal Booths 4032-4042

GE UNIVERSAL *The Gift Line*

92
D7-646

We wouldn't dare walk into Barney Stigman's office with just another electric knife.





Or for that matter, into any buyer's or distributor's office. They're too busy and there are plenty of other electric knives around.

So Van Wyck comes up with something special. Just as we do with our entire line of kitchen electrics.

First of all, it's a beautifully balanced knife. Heft it at the Housewares Show, we're at booths 2737-41.

Then we put extra power into it. So it does what an electric knife is supposed to do: slice easily.

It's also the only open-handled knife available—works good with either hand.

We style it beautifully. And we spend a lot of money packaging it beautifully. We know a lot of them are going to be gifts and, in many cases, the package must make the sale.

We back it all up with a one-year guarantee, then we price it so that the customer is going to have to struggle *not* to buy it.

We do that with electric knives, can openers, mixers, juicers, ice crushers, blenders and various combinations of those items.

And anyone who has handled Van Wyck will tell you we do it well.

Van Wyck International.
The great small appliance movement.

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D7/646

PREMIUM PRACTICE
p. 159 OCT., 1968

If you need a couple of great incentives, here it is.

The Waring Engineers have combined two of the most useful kitchen utensils into one unique appliance. A powerful 3-speed hand mixer and the only all-purpose 3-speed slicing knife.

The unique **Dormeyer Mixer-Knife.**

Never before has an incentive like the Mixer-Knife been offered. Imagine the impact of offering a hand mixer *and* a slicing knife as a premium gift. And that they will receive both of them at the same time in one easy-to-use appliance! And at a price you might expect to pay for a slicing knife or a hand mixer alone.

The Dormeyer Mixer-Knife is made with the same engineering ingenuity as Waring Blenders. And the Waring Engineers can set up a specially designed premium program for you. You can choose any Waring or Dormeyer appliance, in any price range to fit your specific incentive program.

If you need a couple of great incentives to boost your sales and bring in more customers, the Dormeyer Mixer-Knife is the one.

For information concerning other dealer incentive programs, contact the Waring Engineers.

FROM WARING THE ENGINEERS

Please have the Waring Engineers help me with an incentive program.

☐ Send more information.
☐ Have a salesman call.

Name _____ Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Waring Products Division, Route 44, New Hartford, Conn. 06057

WARING PRODUCTS DIVISION
DYNAMICS CORPORATION OF AMERICA

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Design (London)
TS 149. D4
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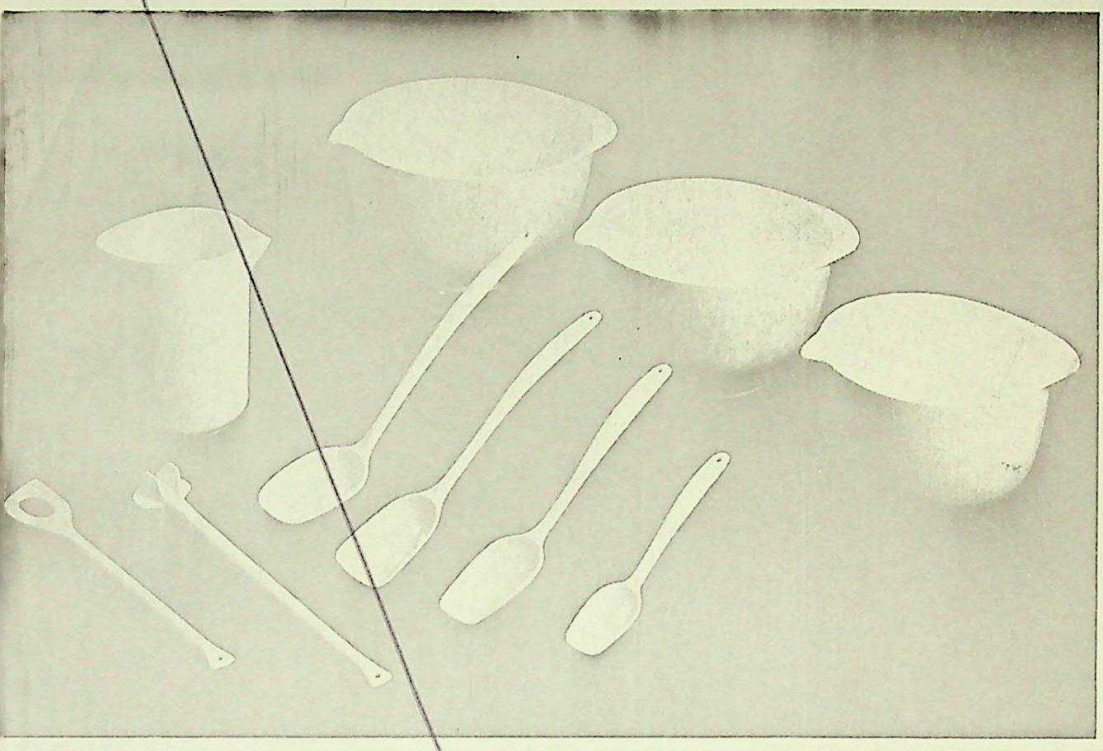


Mixing in Melamine

This Melamine range of kitc... was designed by Count Sig... Bernadotte for B.I.P. Gayd... The range includes mixing b... jugs, spoons, and mixing to... made in white, blue and y...

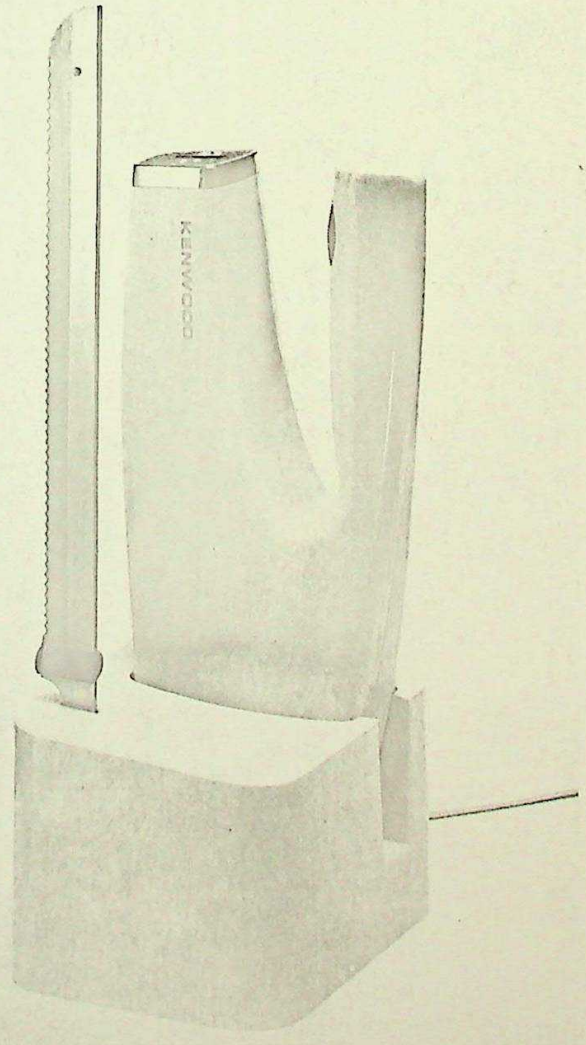
The bowls are straight-si... plenty of room for creaming ... beating and are tall enough t... splashes when whipping. A l... one side and handle on the o... make for easier pouring. The ... have pierced handles for ha... Shown here are eight-pint, ... and four-pint mixing bowls ... approximately 22s 6d, 18s 1d ... a mixing jug costing 11s 3d; f... spoons at 2s 3d, 3s 6d, 4s and ... and mixing tools 14s 11d and ...

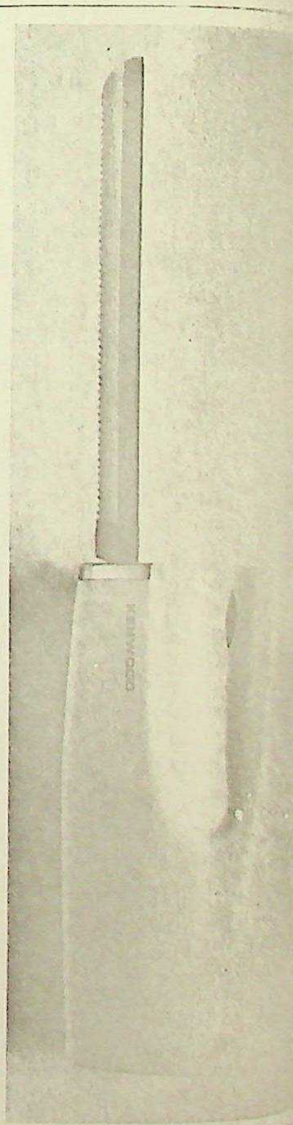
Cordless electric slicing knife

A cordless battery-operated slicing knife has been brought out by Kenwood. Designed by Kenneth Grange, it is the only British product of its kind. Because there is no cord, the knife is fully portable: the knife handle carries the batteries and they are recharged by returning the knife to the storage stand, *right*, which is plugged in to a power point.

The knife has twin 8-in stainless steel blades, developed by Wilkinson Sword, and effortlessly carves meat, slices vegetables, fruit and bread or awkward items like hard-boiled eggs, sponge cakes or a pile of sandwiches.

The casing for both the stand and the sculptured handle is made of plastic in white with a dark blue trim to match other Kenwood appliances. The stand can be wall mounted or used freestanding, and operates from 220/240 volts A.C. The total length of the knife is 16¾ inches and the overall height of stand and knife is 11½ inches. It costs 15 guineas.





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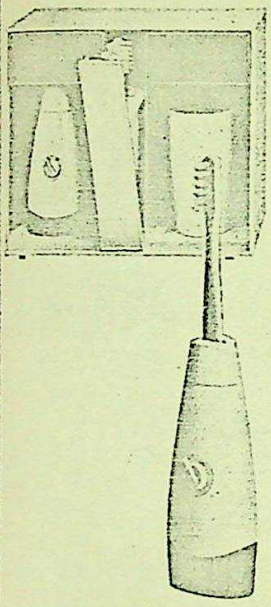
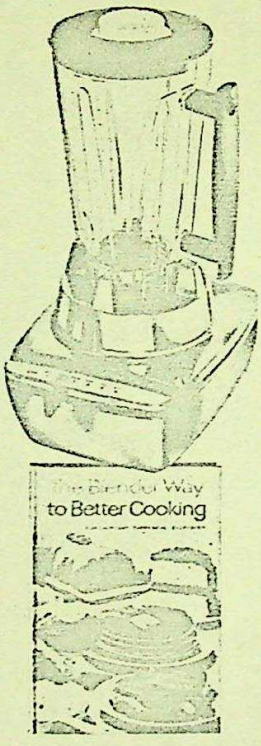
Hamilton Beach has a gift for bringing out the best in people.

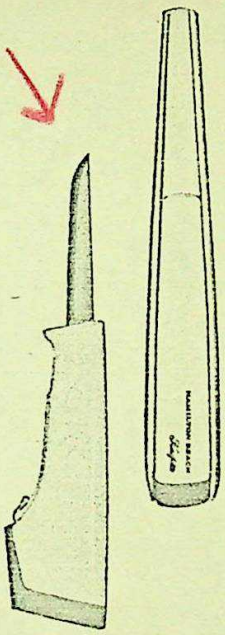
April, 1967
p. 175
Premium Practice



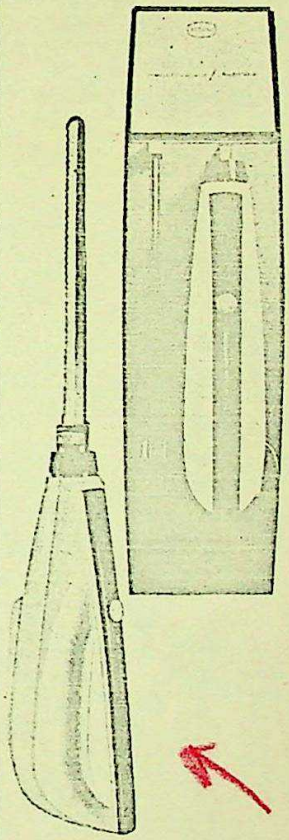
Oral Hygiene Center Exclusive "Gold-Ion" light kills germs on bathroom tumbler, keeps toothbrushes firm, dry, pleasant to use. Two models have a power handle that makes any toothbrush a cordless electric.



Cookbook Blender This is the busy blender. It's like seven appliances in one. Whips, purees, grates, chops, mixes, blends and liquefies. Full-color, 208-page cookbook, "The Blender Way to Better Cooking," is free with each blender.



Cordless Knifette All-purpose kitchen knife designed to do anything an ordinary knife will do, only better, faster and easier. Available in four kitchen-matched decorator colors.



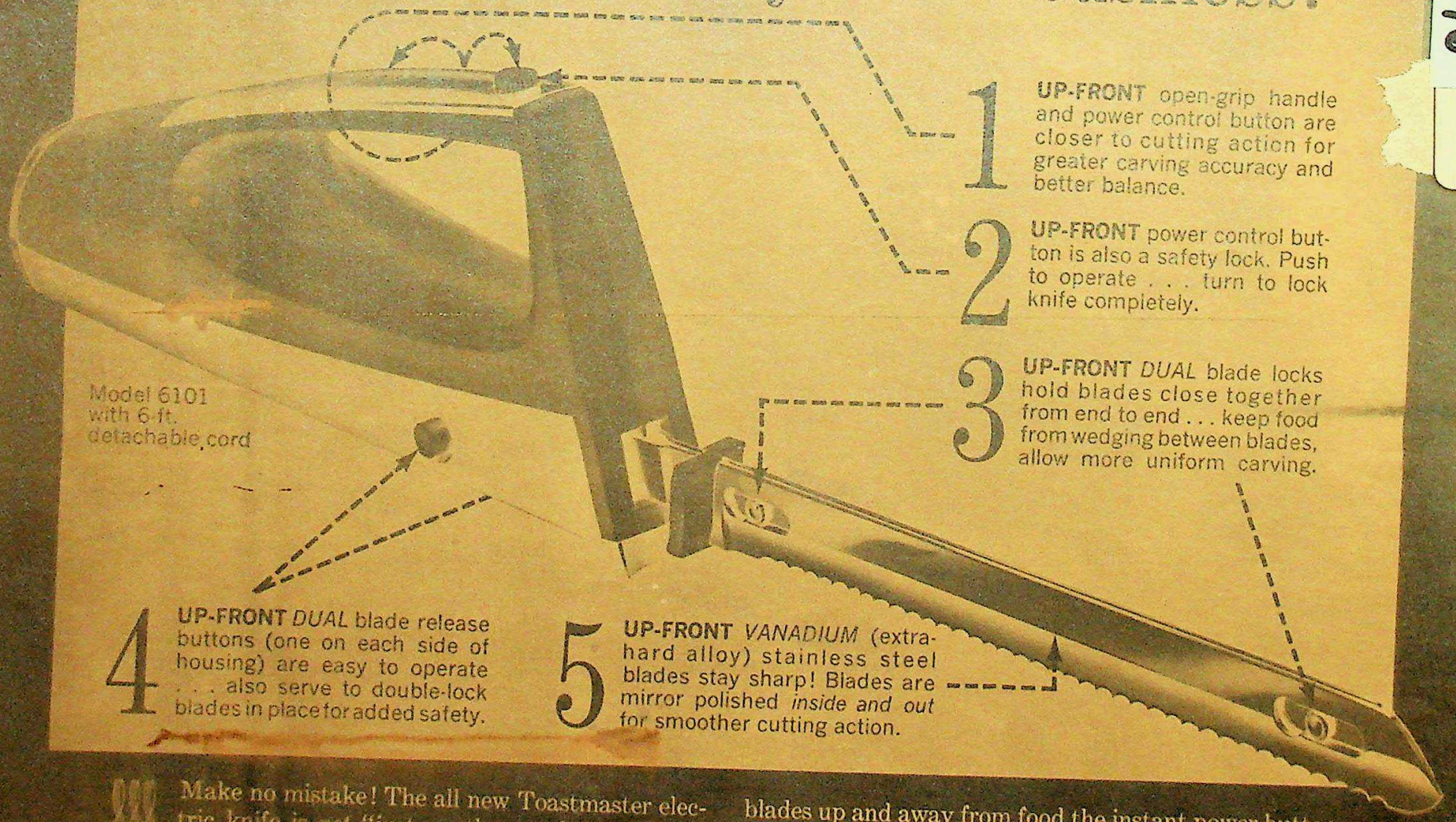
"Switchblade" Electric Knife This electric knife with the famous "hole in the handle" has a new twist...a "switchblade" that rotates vertically or horizontally so you can carve right through hard-to-carve spots.

Before you set up an incentive program, look into the entire line of quality Hamilton Beach appliances. Write Premium Department, or call 414-632-2751.

HAMILTON BEACH DIVISION
RACINE, WISCONSIN

SCOVILL

5 up-front features give you the sharpest sales story in the business!



1 **UP-FRONT** open-grip handle and power control button are closer to cutting action for greater carving accuracy and better balance.

2 **UP-FRONT** power control button is also a safety lock. Push to operate . . . turn to lock knife completely.

3 **UP-FRONT** *DUAL* blade locks hold blades close together from end to end . . . keep food from wedging between blades, allow more uniform carving.

4 **UP-FRONT** *DUAL* blade release buttons (one on each side of housing) are easy to operate . . . also serve to double-lock blades in place for added safety.

5 **UP-FRONT** *VANADIUM* (extra-hard alloy) stainless steel blades stay sharp! Blades are mirror polished *inside and out* for smoother cutting action.

Make no mistake! The all new Toastmaster electric knife is *not* "just another model". Fact is, it's loaded with convenience features your customers can't find on any other electric knife. Besides the outstanding new up-front features listed above, the Toastmaster carving and slicing knife is *safety balanced* to tilt blades up and away from food the instant power button is released. Has a built-in table rest, and comes complete with plastic blade shield and 6-foot *detachable* cord.

So with all these features (plus Toastmaster TV advertising on this new knife), you can really get cuttin'! See your Toastmaster distributor today for details.

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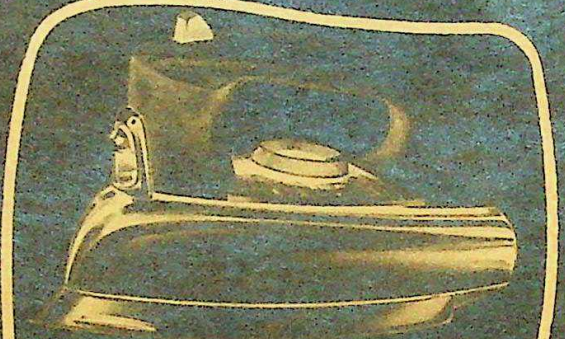
Oct. 1966 Mart Magazine p. 6



"A Hoover Iron? With a stainless steel soleplate? Gee, I'm glad to hear that. Hoover makes great products."

"You mean Hoover has an electric knife? I'm glad to hear it. The name Hoover is like a guarantee that it's an appliance made to do the job – and do it for years."

"Hoover Electric Fry Pans? I'm glad to know about them. I've been looking for a fry pan. And that name, Hoover, means it's a dependable product."

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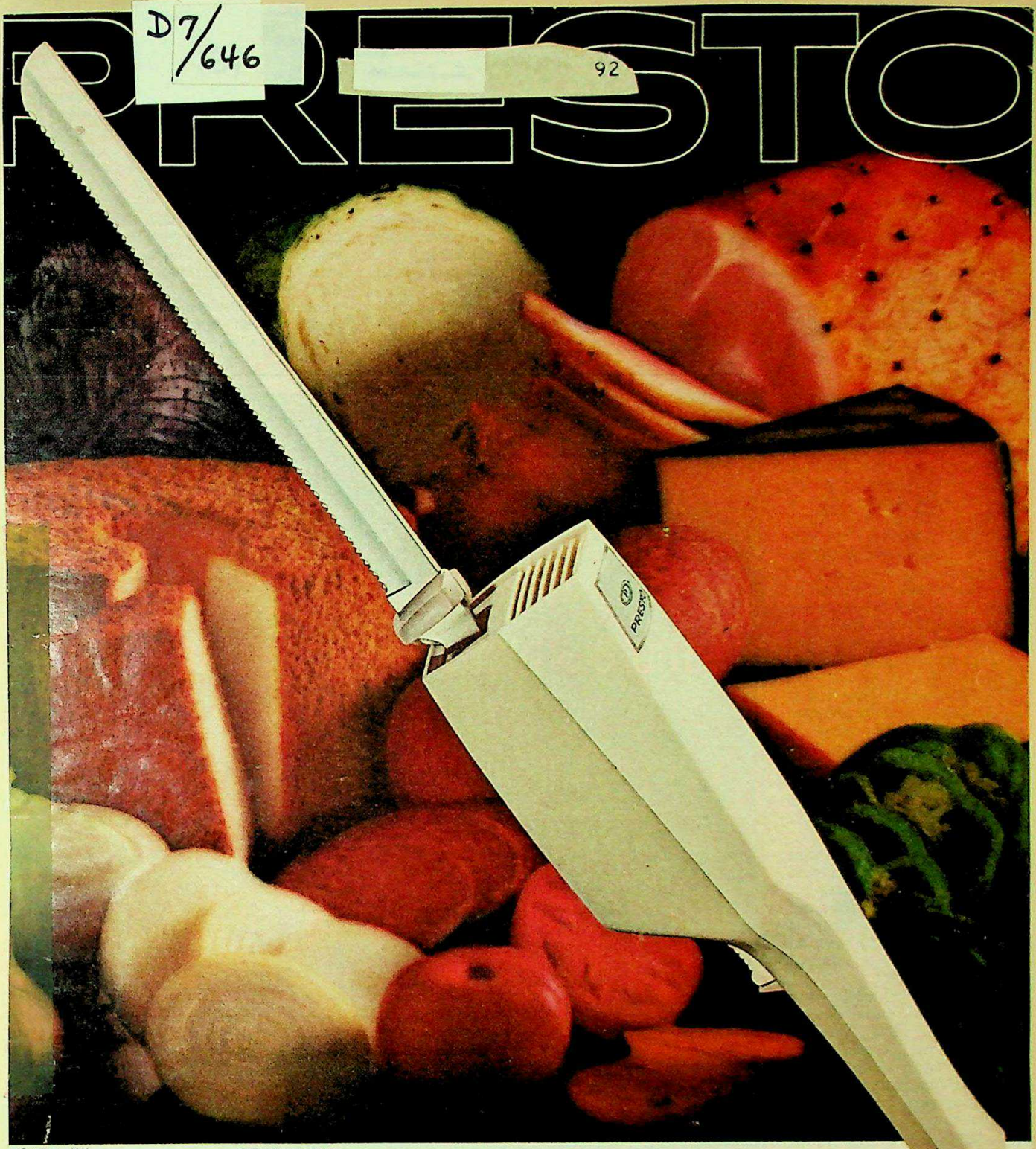

© N.P.I.I., 1965

McCall's Magazine
P. 179
Dec, 1965

This is the Knife, Mac

(WITH THE WEIGHT UP FRONT WHERE THE WORK IS DONE.)

Finally somebody designed an electric knife for the lady of the house . . . with a slim handle that even a small hand can grip firmly and comfortably. And the weight is up front where it helps rather than hinders. This is Presto's *balanced* design—that helps a man carve majestically at dinnertime yet works just as well for everyday slicing of fruits, vegetables, meats . . . even tender angel food cake.

Look where we've put the blades: low enough to cut *all the way down* using the whole length of the blades. That, plus the keenly-honed surgical steel blades, keeps Presto purring through every cutting chore. Cleanup's a cinch; blades are stainless, snap in and out.

Presto's Deluxe Model, at left, adds even more convenience, with a handsome storage case for handle, blades and cord. Everything stores easily on counter, kitchen drawer or mounted on the wall.

Both models are great for gals. But be generous . . . let Dad still carve at dinnertime, huh?

PRESTO® The Pressure Cooker People
NATIONAL PRESTO INDUSTRIES, INC., EAU CLAIRE, WISCONSIN

XD-22/3

McCall's Magazine
December, 1965
p. 179

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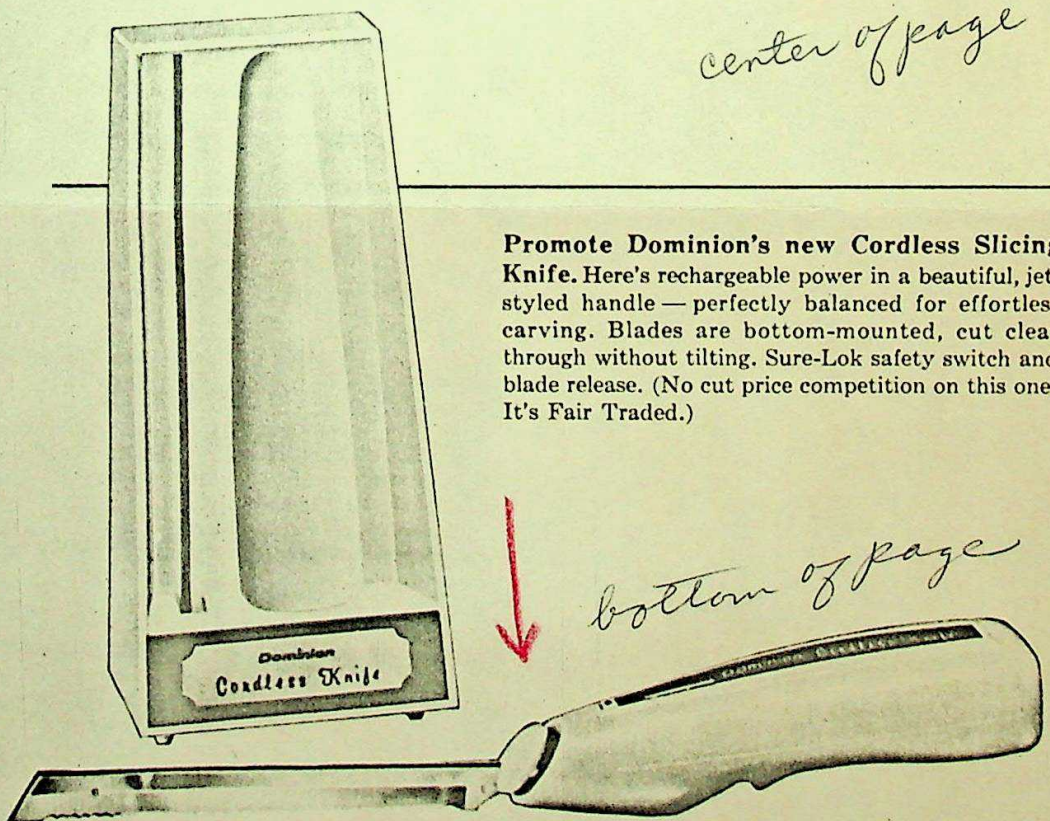
Feature Dominion Hair Dryers, like this stunning Model 1840 with textured tapestry on the luxurious case, fast-drying bonnet and hair dryer itself. Only one of the industry's most complete, most glamorous line. All Very Rich.

~~XD-22/3~~

center of page

Promote Dominion's new Cordless Slicing Knife. Here's rechargeable power in a beautiful, jet-styled handle — perfectly balanced for effortless carving. Blades are bottom-mounted, cut clear through without tilting. Sure-Lok safety switch and blade release. (No cut price competition on this one. It's Fair Traded.)



bottom of page

D97
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D7-646
X12-2443

Now...hand-matched
Eversharp blades with
the new Slimline
RIVAL®
Slimline
ELECTRIC
KNIFE
RIVAL
electric
knife
Styled to sell on sight; beautiful gift box is the clincher. Exclusive Slide-A-Way blade release. Perfectly balanced for ease of handling, effortless slicing and carving. Loaded with features and boasting a hot promotional price to build volume fast.
Model 1220
RIVAL MANUFACTURING COMPANY • KANSAS CITY, MO.
In Canada: Montreal

Home Furnishings Daily

Thursday
Aug. 26, 1965

p. 18

Home Furnishings Daily

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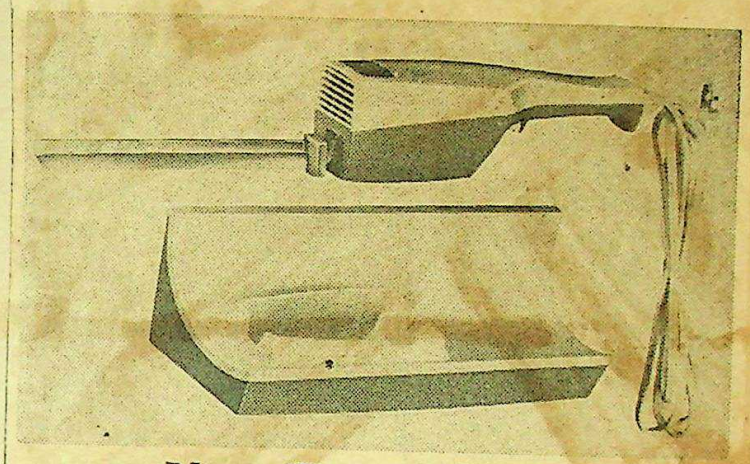
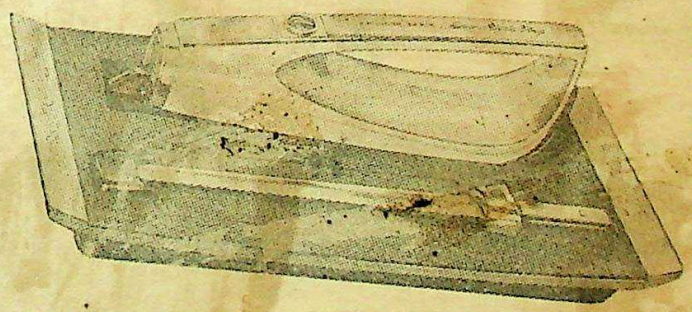
P. 27 ↓ June 3, 1965



New Presto Knife

Deluxe electric slicing knife introduced by National Presto Industries, Inc., Eau Claire, Wis., features a storage case that holds the handle, blades and cord. Including a bracket for easy wall mounting, the unit retails at $26.95.



Deluxe Handle-With-Hole

Hamilton Beach's new deluxe electric slicing knife, No. 273, comes with a red velvet-topped storage tray which holds the power handle, blades and 8-foot detachable cord. The knife, which carries a $29.95 suggested retail features a safety switch on its chrome-inlaid handle-with-the-hole in it, textured upper housing. Details of the Racine, Wis. producer's fall line appeared in Monday's paper.

May 27, 1965
p. 22
←

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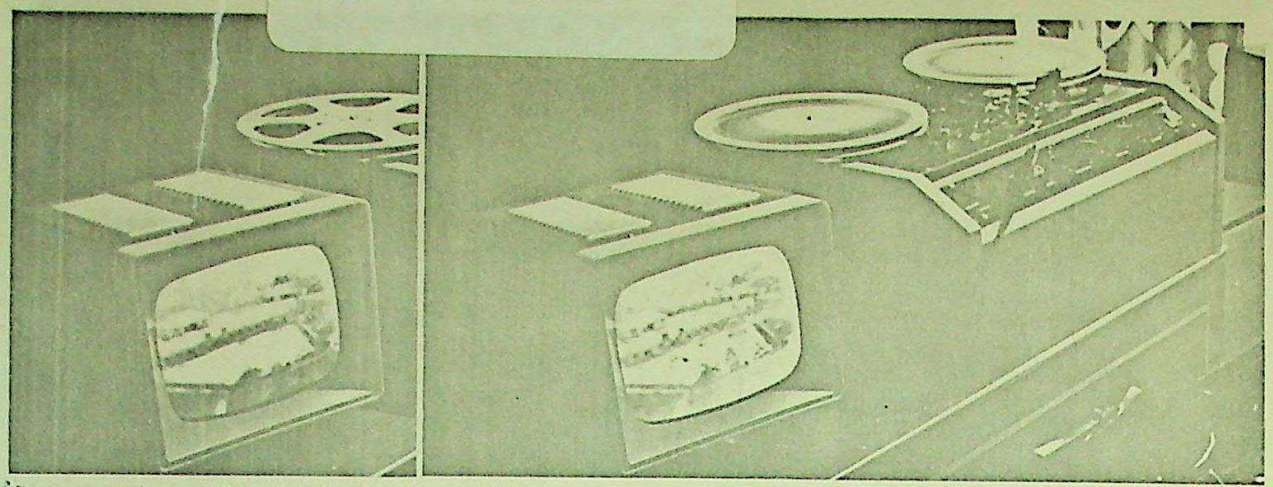


Picture quality of Wesgrove's recorder (right) compared favorably to original (left) with special equipment.

A close-up look at Wesgrove's tv tape recorder

Wesgrove's home video tape recorder finally officially made it to the U.S. However, it still is not a mass consumer product, because: (1) adapting the set for use with a standard television receiver is a fairly technical operation, and (2) the company admits that recordings made from regular tv receivers have poorer quality than is desirable.

Not for the housewife is how one Wesgrove spokesman described the machine. The company is courting what it terms "serious amateurs" and the semi-professional and institutional market.

The English-built tv recorder, first announced by MERCHANDISING WEEK on Feb. 8, was demonstrated in New York City on Apr. 29. Operating on a high-grade version of ordinary ¼-inch triple-play sound-recording tape, the Wesgrove machine, demonstrated by the company president, Jack J. Jones, accurately and clearly recorded (see photo) from a special tv camera set up in Jones' New York hotel room.

But both Jones and his chief engineer, Bill Rundle, admitted that recordings made from a regular television receiver would have poorer quality. However, the machine does work, it does retail for under $500, and Hal Cox, newly named national distributor (MW, 26 Apr, p.3), is promising immediate delivery.

The retail price for the unit—in kit form—is $392. An assembled kit is priced at $492. A more sophisticated model, which is not yet in full production will sell for $792. Finally, a complete package—which includes a recorder, a small-screen monitor (Japanese-built), a camera (also Japanese-made), a tripod, and a lens—will sell for $1,240 with the assembled-kit recorder, or $1,528 with the more sophisticated recorder.

"There is some difficulty adapting the recorder to different television receivers," Jones said, "but we haven't yet found one to which it can't be adapted."

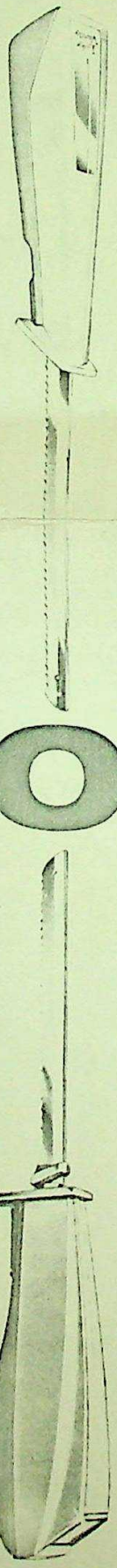
The distributor, Hal Cox, of Hal Cox Inc. in San Francisco, says he already has 20 of the units (ten $392 kits and ten $492 assembled models) in stock. He is now forming a distribution company, Wesgrove International, which will have offices in New York and San Francisco. Jones promises Cox a shipment of 100 units in June; by the end of the year he plans to have shipped 2,000 units to the U.S. Full production of the $792 unit is expected to begin in July or August.

Wesgrove is the first company to place a low-priced video tape recorder on the market in this country, although several other concerns in the U.S., Japan and elsewhere have demonstrated such machines.

Wesgrove now is considering making a $125-$150 unit that would simply play pre-recorded video tapes. The company has a working model, but Jones admits that production of at least 50,000 units would be necessary to bring the price down to the $125 level. Also, a supply of pre-recorded tapes would have to be arranged. But Jones is optimistic about the marketing possibilities of such a unit.

May 10, 1965
p. 22
Merchandising Week

here are a couple of pointers on PROFIT



Two pointers, to be precise. The Lady Vanity Electric Knife (EK-1), complete with Wall/Table Storage Rack and the new Lady Vanity Cordless (EK-5), complete with Recharger and Storage Rack. Both are promotionally priced and both allow you to meet any competition while still giving you a respectable margin of profit. Handsome, powerful and performance proven, both come with Merit's exclusive full-year, over-the-counter replacement guarantee. Nearly half a million were sold in 1964—profitably. Get the Point?

A product of Merit — Lady Vanity

REPLACEMENT GUARANTEED
if defective within one year

Electric Knives • Hair Dryers
Coffeemakers • Skillets • Defrosters
Ranges • Ice Cream Makers

MERIT ENTERPRISES INC., BROOKLYN, N.Y. 11208

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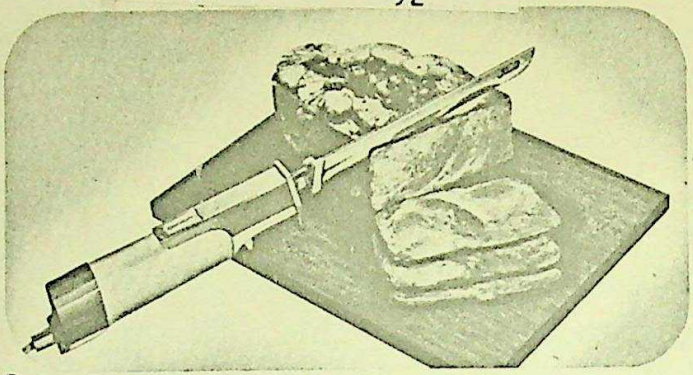

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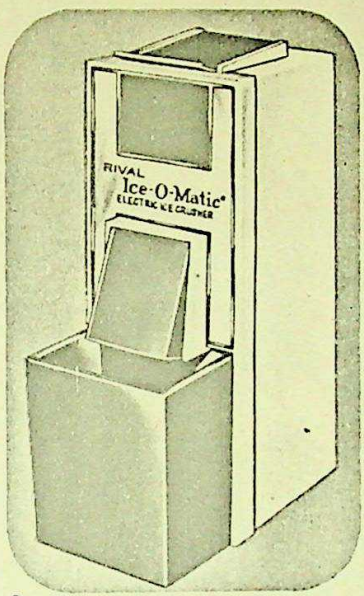

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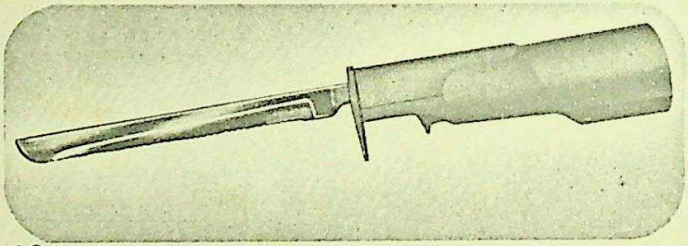

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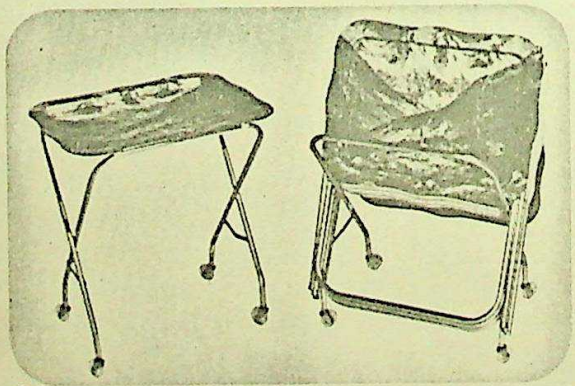

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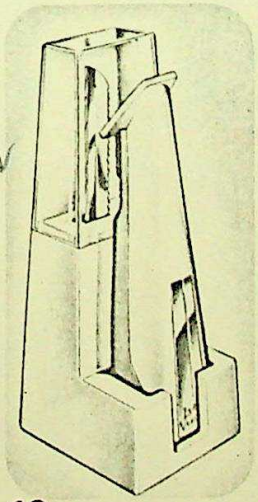

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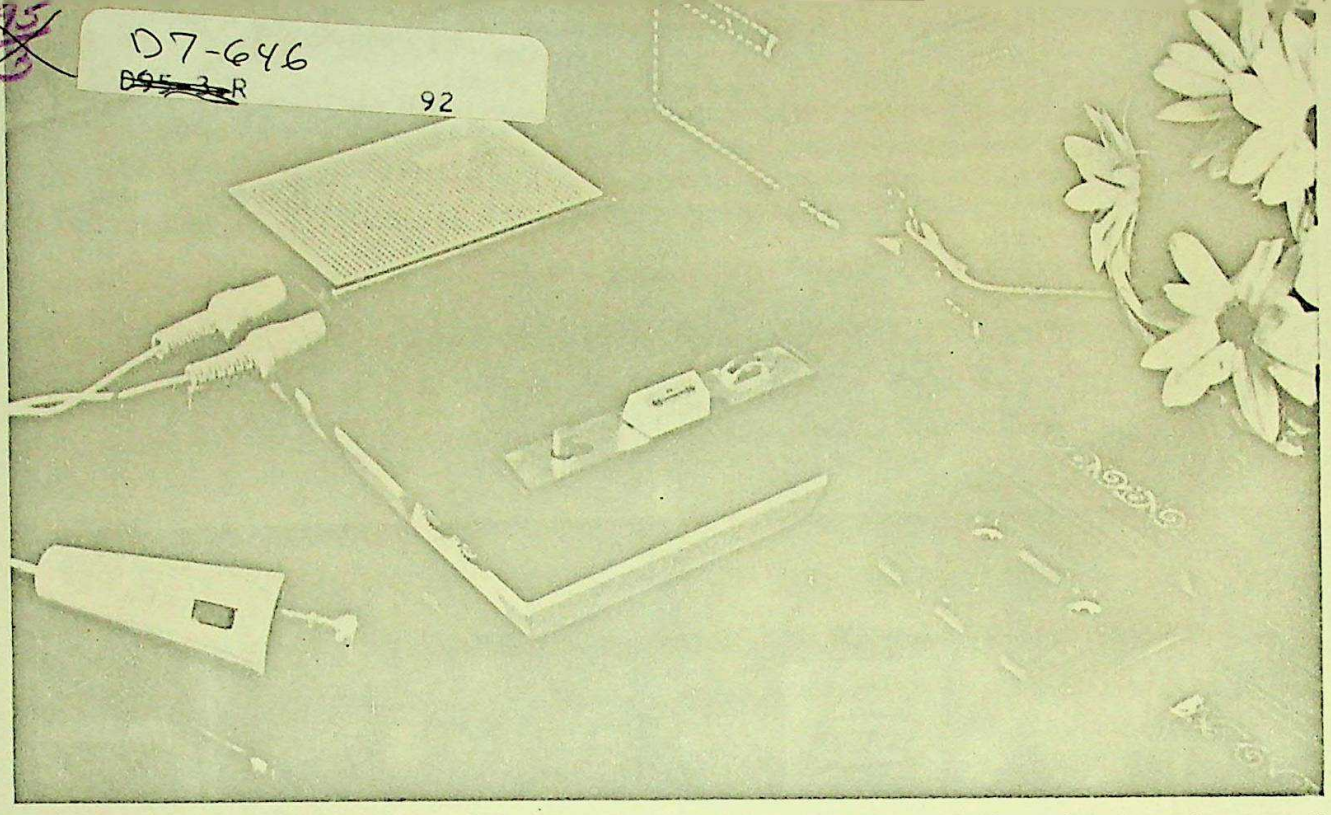
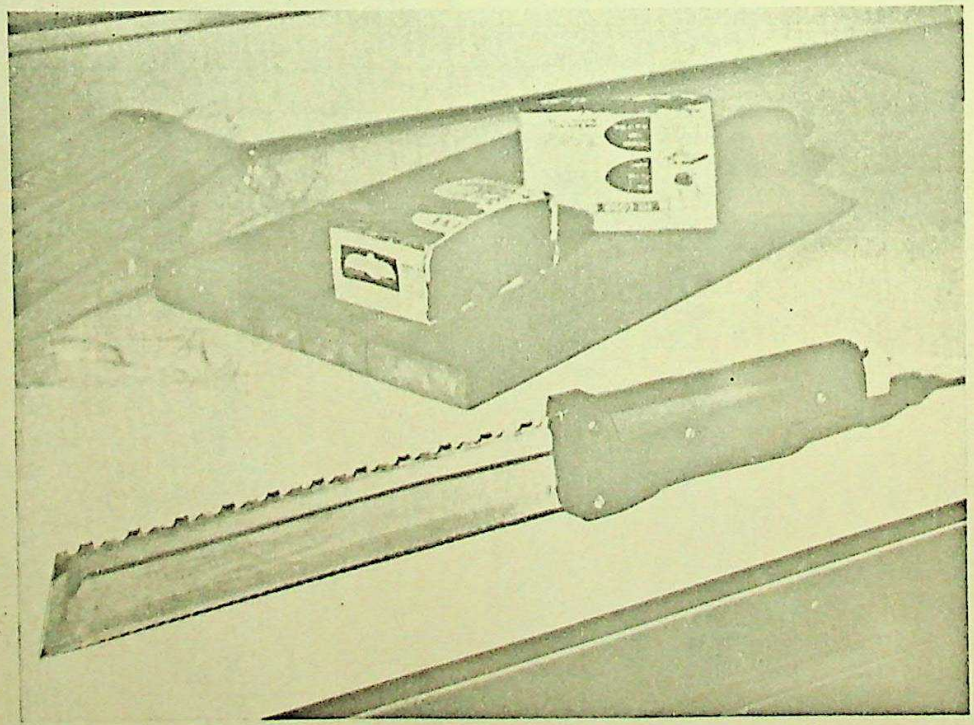


Consider a miniature tape recorder as a gift for your favorite executive. Snap in a cartridge, and it's ready to record or play back an hour's worth of talk or music, any time or anywhere. Cordless, it operates on 5 C-type batteries, and it is small enough to carry in a 3-inch-deep briefcase. Norelco's Carry-Corder, by North American Philips Co.; it costs about $125.

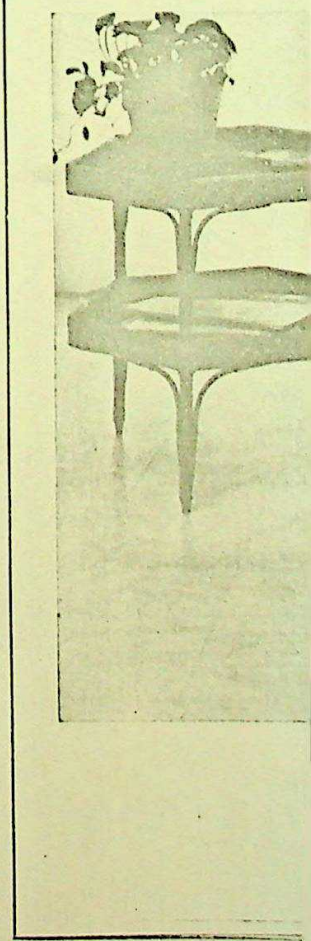
~~XD-22/3~~

GIFTS YOU COULDN'T GIVE LAST YEAR *continued*

p. 184
House Beautiful



As a kitchen gift, this knife that cuts with heat is unique. One edge is for carving. The other slices easily through frozen meat or a block of frozen food. The desired amount may be cut and the balance returned to the freezer. Osrow Electric Heat Knife costs about $15.



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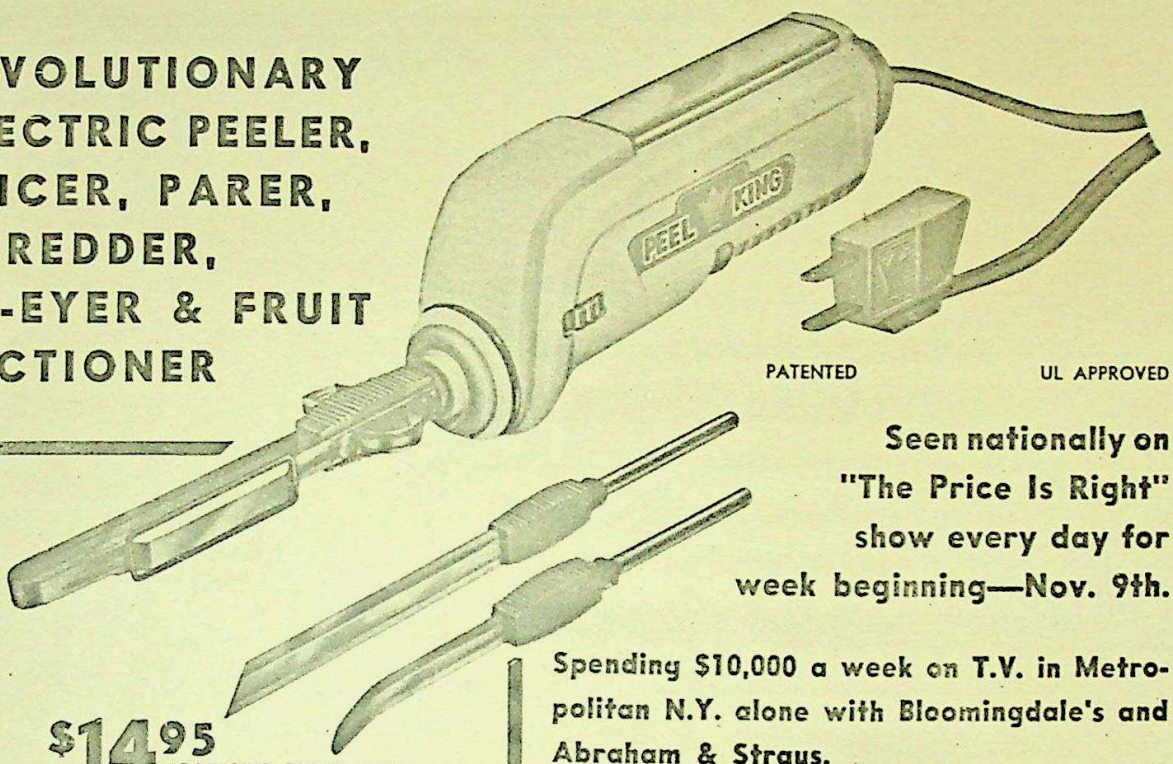
~~D95-3-R~~ 92

Housewares Review P. 31 Nov., 1964

ERWIN JACKMAN GOES ALL OUT SO YOU CAN HAVE A SELL OUT

REVOLUTIONARY ELECTRIC PEELER, SLICER, PARER, SHREDDER, DE-EYER & FRUIT SECTIONER



PATENTED UL APPROVED

Seen nationally on "The Price Is Right" show every day for week beginning—Nov. 9th.

Spending $10,000 a week on T.V. in Metropolitan N.Y. alone with Bloomingdale's and Abraham & Straus.

THE ONLY ELECTRIC PEELER ON THE MARKET TODAY

$14.95 PROTECTED RETAIL PRICE

COMPLETE WITH ALL 3 STAINLESS STEEL BLADES

WITH THESE GUARANTEES YOU JUST CANNOT MISS!

6-point saturation program puts the traffic back in your traffic appliance department and we bear entire cost of all TV advertising.

ERWIN JACKMAN PROMOTIONS HAVE BEEN SOLID SELLOUTS IN TOP TRADING AREAS INCLUDING WASHINGTON, MIAMI, BUFFALO, PORTLAND, SAN FRANCISCO, PROVIDENCE, AND MANY OTHERS. ORDER NOW TO RECEIVE 30 DAY EXCLUSIVE IN YOUR CITY. LINE UP THIS EXTRA SOURCE OF GUARANTEED PROFIT AND TRAFFIC FOR YOUR STORE.

WIRE—PHONE—WRITE DO IT NOW!

- ★ **GUARANTEED TV SATURATION PROGRAM** Erwin Jackman guarantees to run a saturation program on TV in selected cities during the campaign, directing all sales in your area to your store.
- ★ **GUARANTEED PROFITS**
- ★ **GUARANTEED QUALITY** UL approved. One year over-the-counter guarantee.
- ★ **GUARANTEED** INCREASE IN OVERALL **VOLUME**
- ★ **GUARANTEED** INCREASE IN OVERALL **TRAFFIC**

CERTAIN CHOICE TERRITORIES OPEN FOR QUALIFIED REPRESENTATIVES

ERWIN JACKMAN PROMOTIONS

EXCLUSIVE NATIONAL SALES REPRESENTATIVE OF S&H MANUFACTURING COMPANY

11 WEST 42nd STREET, NEW YORK, N. Y. 10036 • WI 7-5451 • WI 7-4672

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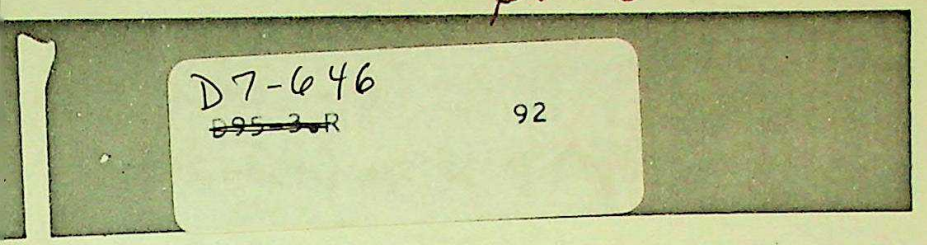
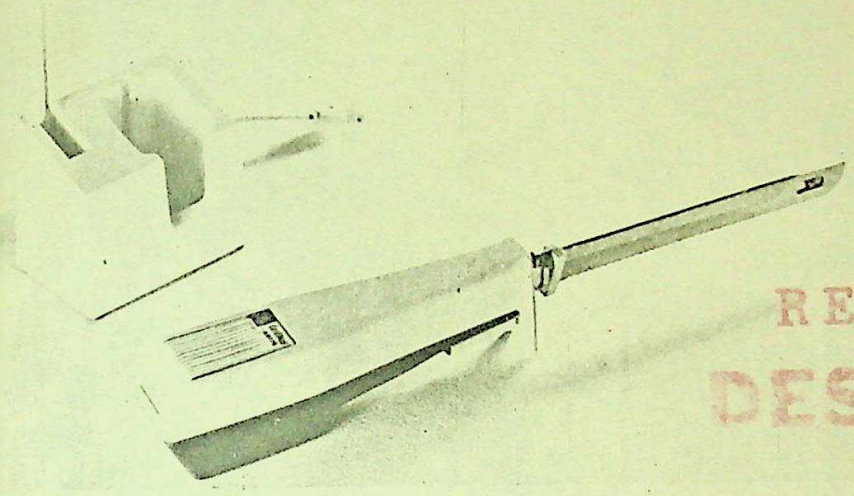
August, 1964
p. 56

Industrial Design

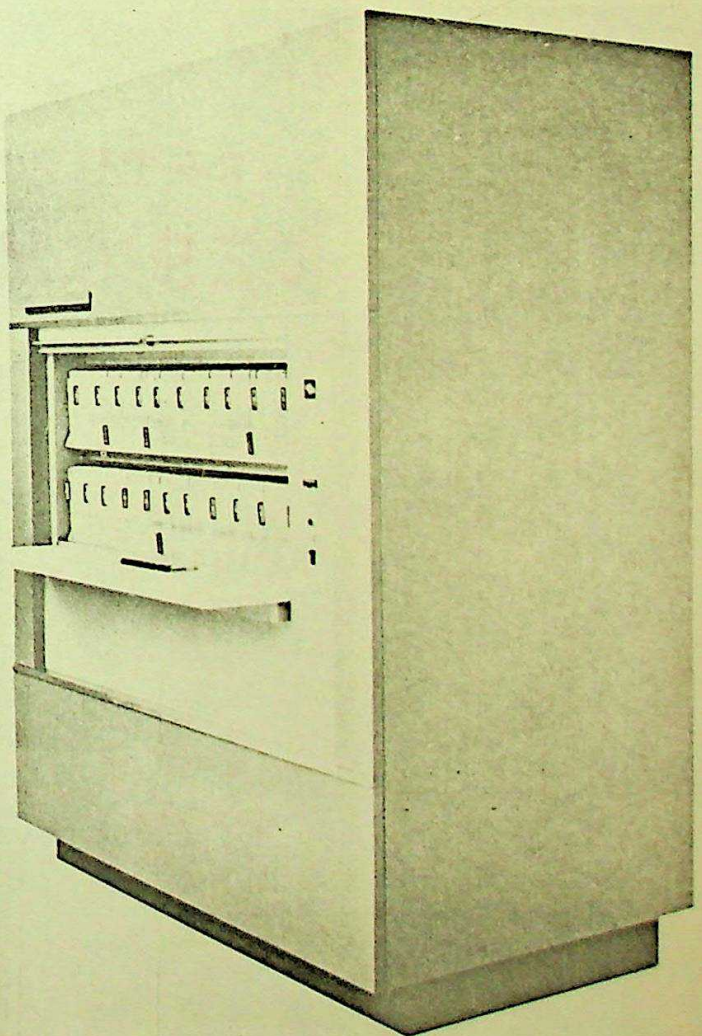


General Electric has introduced a cordless slicing knife that will be available at retail level in September. The re-charger rack, which can be hung on the wall or placed on the counter, features a built-in storage for any unused length of charger cord. The knife can be used anywhere—even on a picnic. It operates off five rechargeable nickel cadmium sub C cells.

publication released Aug. 17, '64



RETURN TO DESIGN DIV.



Remington Rand's Lektriever Unit is an automated filing system that houses up to 160,000 letter or legal size records and can deliver any one of them in seconds. The unit is designed so that each file is individually suspended and equally spaced on a conveyor system. The mechanism rotates in two directions so that each file automatically travels by the shortest route to reach the operator sitting at the front of the unit.

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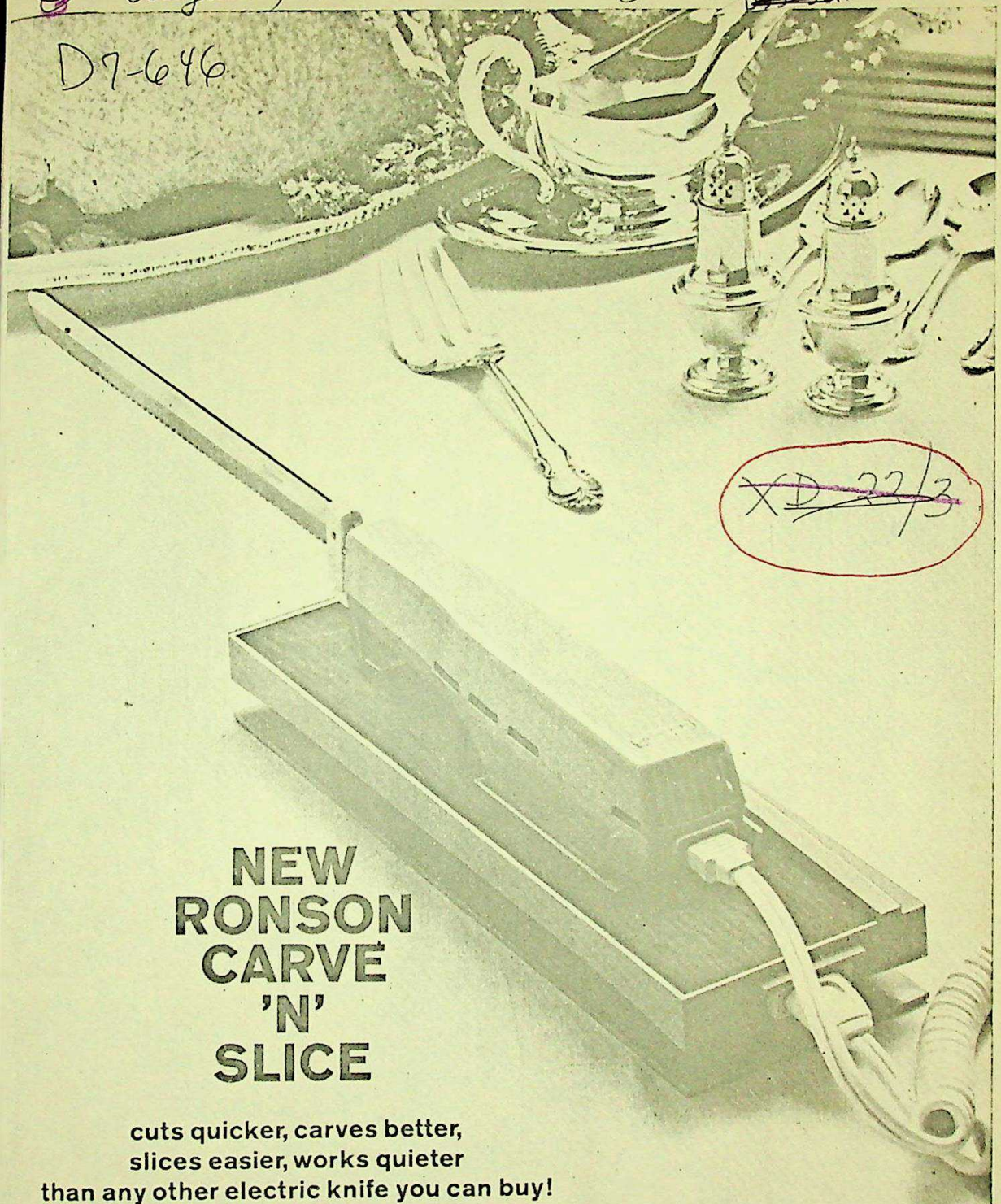


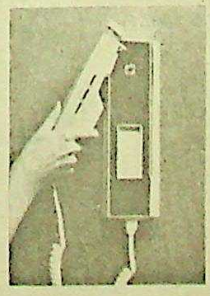
NEW RONSON CARVE 'N' SLICE

cuts quicker, carves better, slices easier, works quieter than any other electric knife you can buy!

FEATURE-FOR-FEATURE—RONSON GIVES YOU THE SELLING EDGE! And your sales will prove it! The new Ronson Carve 'N' Slice is the fastest (2,400 strokes per minute)! The lightest (only 24 ounces)! The quietest electric knife on the market today! It has solid-selling features like double hollow-ground, tungsten carbide-edged blades and special carving tip for getting right in and around bones. Exclusive features that will make the new Carve 'N' Slice out-slice and out-sell all others.

There are two handsomely packaged Carve 'N' Slice models, both with 8-foot cords. The Deluxe has a handsome wall rack-table stand with built-in outlet, plus additional 5 foot coil cord.

Anyway you slice it, Ronson's Carve 'N' Slice is easiest to sell... because it gives you the selling edge!



Deluxe Model has detachable 5-foot coil-cord, plus wall rack-table stand with built-in outlet, 8-foot extension cord.

Other Ronson Kitchen Products: Ronson "Can-Do", Ronson Blender.

BY THE MAKER OF FAMOUS RONSON LIGHTERS

RONSON

automatically better

RONSON CORP., WOODBRIDGE, N.J.

D7-646

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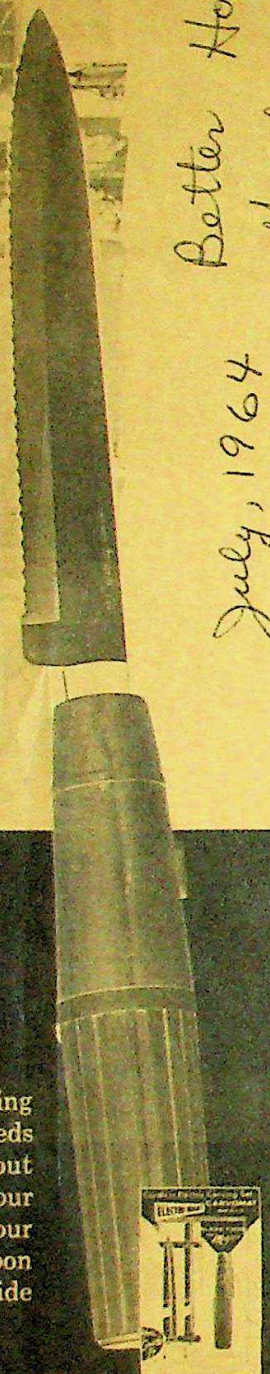
D95

Better Homes & Gardens page (94)

July, 1964

Learn How Alside Aluminum Siding Cuts Home Maintenance to the Bone...



and get this Electric Carving Set

FREE!

Learn about the baked-enamel aluminum siding that *Practically Pays for Itself* because it needs no painting for years and years. Find out about Alside's *Amazing Guarantee*. If you own your home, here is all you have to do to get your free Electric Carving Set. Just mail this coupon that asks for an appointment with the Alside Exterior Designer.

Alside, Inc. markets aluminum siding under these brands:

Lifewall · Alside · ALUMA-KING

Works on batteries—no cord. Cuts thin or thick, no effort. Two blades, slicer and carver.

MAIL THIS COUPON

Alside, Inc., Dept. 7, Box 1261, Akron, Ohio

Gentlemen: I want to know about Alside Aluminum Siding. Please arrange an appointment with an Alside Exterior Designer. He will bring with him my Electric Carving Set. I agree to listen to his presentation and understand there is no obligation to buy.

Name _____

Address _____

City _____ State _____

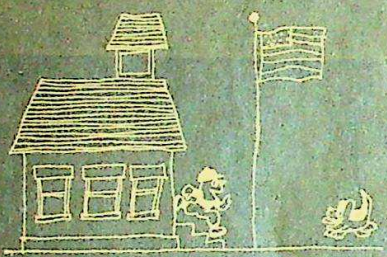
XD-12/13

KEEP THE KIDS HAPPY ON A TRIP

You can win if you watch the things on wheels.

This game should roll along fast!

1	Car with Hood Open	1	Gasoline Tra
2	Station Wagon	2	Blue Sedan
3	Car Making Left Turn	3	Car with Visible
4	Car with Top Luggage Carrier	4	Dump Truck
5	Big Red 6-wheel Truck	5	Two-tone Car
6	Convertible	6	Car Same Color
7	Jeep	7	Car with Trailer
8	Foreign Car	8	Car with Door
9	Semi-truck Standing Still	9	Truck with C
10	Bicycle	10	Refrigerator Tru
11	Road Building Equipment	11	Car with Fo
12	Car Pulling House Trailer	12	Car with Open



Pick out th where peo work, a

Try this one when you're going through a city:

1	Weather Vane on Building	1	Church
2	School House	2	Ladder (any type
3	Red Roof	3	Two color Roof
4	House Under Construction	4	Green Roof
5	Broken Window in Building	5	Farm Building B
6	Brick Fireplace	6	Stone Fireplace
7	Brick House	7	Wall Without a W
8	U.S. Flag on Building	8	Canvas Awning
9	Round or Oval Window	9	Church with Colo
10	Venetian Blinds in House	10	Glass Block in B
11	Building Damaged by Fire	11	Metal Building
12	Outdoor Telephone Booth	12	Government Bu

You can get a booklet containing these 5 games other fascinating travel games, by writing to: Games, Dept. 5307, Better Homes & Garden Locust, Des Moines, Iowa 50303. Enclose coin check or money order (sorry, no stamps or C Please allow 2 to 3 weeks for delivery. We rec you order the booklets in sets of four, becau family member will want his own. Single co available, however.

☐ sets of 4 "Travel Games" booklets @ $1

☐ single booklets @ 30c each

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M. Feau

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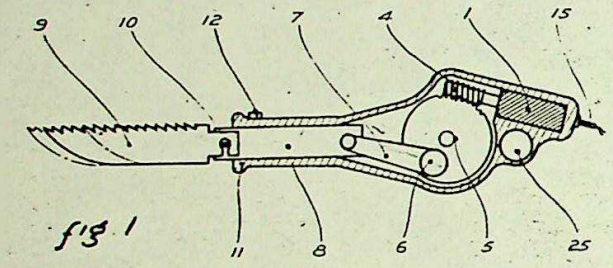
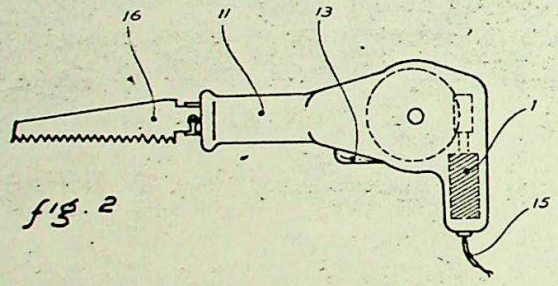


fig. 1



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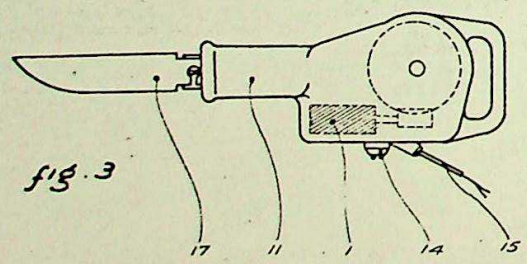

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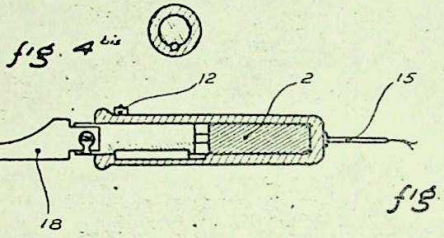

fig. 4 bis

fig. 4

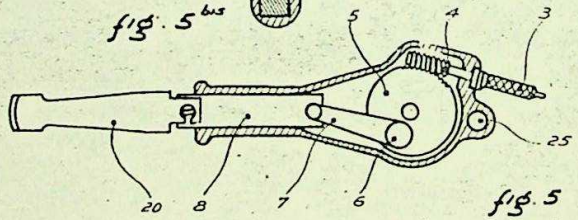

fig. 5 bis

fig. 5

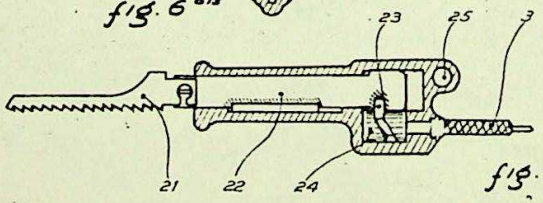

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fig. 6

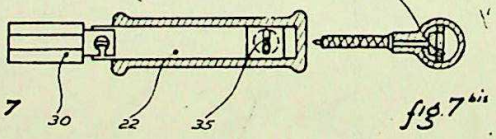

fig. 7

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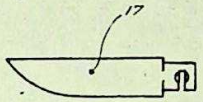

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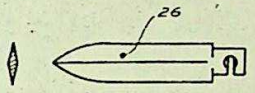

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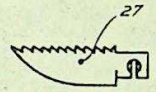

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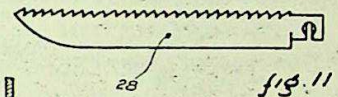


fig. 11

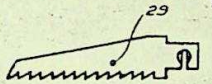


fig. 12

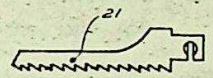


fig. 13

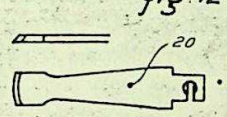
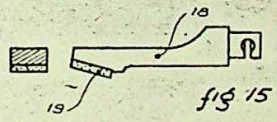


fig. 14



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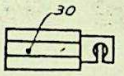

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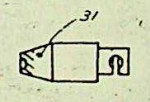


fig. 17

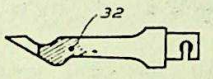
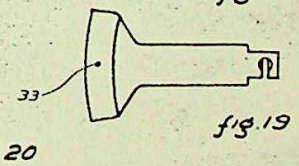


fig. 18



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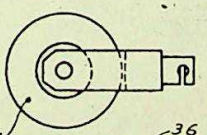

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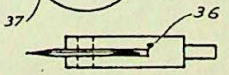

fig. 20 bis

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Feau

62

RÉPUBLIQUE FRANÇAISE

MINISTÈRE
DE L'INDUSTRIE ET DU COMMERCE

SERVICE
de la PROPRIÉTÉ INDUSTRIELLE

BREVET D'INVENTION

Gr. 5. — Cl. 4. N° 1.116.778

Classif. internat. : B 23 *d* — B 24 *b* — B 25 *c*

EXAMINER'S COPY 30/11

Outil vibré.

M. Lucien-Jacques FEAU résidant en France (Seine-et-Oise).

Demandé le 23 octobre 1954, à 9h 30m, à Paris.

Délivré le 13 février 1956. — Publié le 11 mai 1956.

(*Brevet d'invention dont la délivrance a été ajournée en exécution de l'article 11, § 7, de la loi du 5 juillet 1844 modifiée par la loi du 7 avril 1902.*) Cl. 11

Le présent brevet a pour but de présenter un appareil à vibrations capable de recevoir, par un dispositif rapide de fixation, des outils divers ayant des applications bien déterminées.

Ces vibrations pouvant être courtes et rapides, ou plus longues et relativement moins rapides. Le moteur électrique pneumatique ou autre, déterminant ces vibrations pouvant être incorporé ou indépendant avec transmission par flexible : ces dites vibrations pouvant être produites par rotation ou par pulsations rectilignes.

Les applications de ces outils vibrés pouvant être de couper, scier, buriner ou cisailler, gratter, poncer ou polir, river, clouer, déclouer, percer, pour tamponner, fendre ou refendre, piler, écraser, hacher, etc. Ces outils pouvant être indépendants ou combinés.

Les figures décrites dans les trois planches ci-annexées facilitent la compréhension de cette invention.

Elles ne sont données qu'a titre indicatif, des modifications de formes ou d'agencement, ne pouvant nuire à la validité de cette invention.

Les fig. 1 à 3 montrent diverses réalisations de l'outil vibré avec moteur rotatif incorporé.

La fig. 4 montre cet outil avec vibreur rectiligne incorporé.

Les fig. 5, 6 et 7, des outils vibrés avec moteur indépendant, la transmission du mouvement de rotation se faisant par flexible.

Les fig. 4 *bis*, 5 *bis*, 6 *bis* étant des sections transversales de la poignée montrant des dispositifs pour permettre le coulissement sans rotation possible.

Les fig. 8 à 20 représentent divers outils adaptables utilisant les vibrations, pour leur utilisation ou amélioration de leur utilisation.

Description. — Dans les fig. 1, 2 et 3 le moteur rotatif 1 incorporé, commande par vis sans fin 4 une roue de vis sans fin 5 sur laquelle un maneton 6 excentré commande par une bielle 7 le mouvement alternatif d'un coulisseau guidé 8 qui porte un outil 9 par un dispositif quelconque de fixation rapide 10.

Le mécanisme mobile étant enfermé dans un carter 11 qui sert de manche et de prise pour l'utilisation de l'outil.

Dans ces trois premières figures, le moteur a été placé différemment, suivant le goût de l'utilisateur.

La commande du mécanisme se faisant par un bouton-poussoir 12, une gâchette 13, un timbler 14 placés convenablement pour mettre le contact ou couper le courant amené par les fils 15 dans les exemples précités.

Dans la fig. 1, l'outil étant un couteau dont le dos forme scie et que l'on peut utiliser à deux fins en faisant simplement pivoter l'appareil sur son axe.

La fig. 2 porte une scie simple 16.

La fig. 3 un couteau simple 17.

Dans la fig. 4, le vibreur rectiligne 2 incorporé fait vibrer l'outil 18 portant un dé 19, fragment de meule ou de pierre à polir.

La fig. 5 correspond à la fig. 1 dont le moteur non incorporé est placé de manière indépendante, la transmission de la rotation se faisant par le câble flexible 3.

La fig. 6 montre la commande de vibration du coulisseau 22 par la poussée alternative d'un ergot 23 emmanché et commandé par une rampe hélicoïdale dans le cylindre 24 en rotation, commandé lui-même par le flexible 3.

La fig. 7 en est une variante, un maneton excentré 34 placé en bout du flexible coulissant dans une boutonnière 35 du coulisseau 22 donne le mouvement alternatif de l'outil.

Les outils montrés dans les fig. 8 à 20 étant, dans la fig. 8, un couteau à lame simple à un seul tranchant 17. La fig. 9, une lame double à deux tranchants 26.

Prix du fascicule : 100 francs.

La fig. 10 montrant un couteau à petite lame 27 pour désosser et dont l'arête est taillée pour former scie.

La fig. 11 est une grande lame 28 à trancher avec l'arête dorsale taillée en scie.

La fig. 12 est une scie simple 29 en poussant. La fig. 13 une scie simple 21 à chantourner en tirant.

La fig. 14 est un burin ou ciseau à froid 20.

La fig. 15 est un outil 18 similaire à la fig. 4 et portant un abrasif 19.

La fig. 16 est un petit marteau bloc 30 pour clouer.

La fig. 17, une bouterolle 31 pour river.

La fig. 18, un outil 32 pour déclouer.

La fig. 19, une lame plate 33 pour hacher.

La fig. 20 montre un porte-lame 36 dont la lame circulaire 37 permet une facilité de coupe.

Ce porte-lame pourrait comporter plusieurs lames montées en parallèles sur le même axe.

RÉSUMÉ

Outils vibrés ou à déplacements alternatifs permettant de faciliter grandement les utilisations d'outils pour couper, scier, buriner ou cisailler, gratter, poncer ou polir, river, clouer, déclouer, percer, pour tamponner, fendre ou refendre, piler, écraser, hacher, etc., pour le travail du bois, de la boucherie, travaux de bâtiments, dans les travaux d'art, tels que sculpture, travail de mécanique, et de machines-outils, etc.

LUCIEN-JACQUES FEAU.

Par procuration :

L. GÉRARD.

Pour la vente des fascicules, s'adresser à l'IMPRIMERIE NATIONALE, 27, rue de la Convention, Paris (15e).